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Official Organ of the American Homœopathic Ophthalmological, Otological
and Laryngological Society

THE JOURNAL OF OPHTHALMOLOGY OTOLOGY AND LARYNGOLOGY

Devoted to the Interests of Exclusivists, Specialists and General Practitioners.

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VOLUME XVIII

JANUARY TO DECEMBER, 1912



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The Journal of Ophthalmology, Otology and Laryngology

Vol. XVIII

Lancaster, Pa., and New York, January, 1912

No. 1

EDITORIAL.

GOING WEST.

THESE are two good patients—only too rarely found combined in the same individual: the one pays his bills promptly and the other obeys his physician's orders. The senior editor, like so many of us, prescribed for himself—when he thought of it, and took his own treatments—when convenient, but finally put himself in the hands of a better doctor with the effect that he retires from practice and leaves town for a rest. He has been advised to utilize this opportunity and "learn to play."

But he would feel lost without his beloved JOURNAL and will continue his editorship, mail will be forwarded to him for the present—from his Brooklyn address.

As he wanders farther from Lancaster it will be less possible to make corrections or additions "just as we go to press;" contributors and correspondents are therefore requested to mail their contributions to our pages several days before the first of the preceding month; and so with books for review.

If a personal word may be permitted, he wishes to express, although but inadequately, his sincere appreciation of the many kindly expressions of sympathy and esteem elicited by his illness; so much unsuspected affection has touched him deeply and turned into view the silver lining of the cloud.

The editors feel that each year their efforts in behalf of the JOURNAL have been crowned with greater success, and the increased sympathy and support manifested by the profession of late encourage them in the belief that the volume 1912 will prove better than its predecessors.

MAR 28 1912

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BIOGRAPHICAL SKETCH OF PRESIDENT SUFFA.

J. HOLBROOK SHAW, M. D.,

Boston, Mass.

GEORGE ALSON SUFFA, who was chosen president of the American Homœopathic Ophthalmological, Otological and Laryngological Society at the last meeting, is of German extraction.

He was born fifty-four years ago in the city of Providence, where he received a public school education. Later his parents having taken a farm in Rhode Island he learned the value of industry in the hard school of necessity and developed a robust physique which has stood him in good stead during his subsequent career.

Left at nineteen the practical head of the family, he attacked the problem of getting a living from the land with an energy and originality which brought generous returns. Not only was the family kept together, but sufficient funds were accumulated to enable young Suffa to carry out a cherished ambition to study medicine.

Graduating from the Medical College of the State University of Iowa in 1888 he felt that he must have further technical knowledge and more practical experience before assuming the responsibilities of private practice. He therefore entered St. Luke's Hospital, of Chicago, in 1889, as assistant superintendent where the opportunities for the observation and practice of actual surgery were very great. The following year was devoted to a post-graduate course at the Hahnemann Medical College in Philadelphia with special attention to the diseases and surgery of the eye, which had begun to interest him.

Feeling that he was now equipped to begin the independent practice of medicine he opened an office in Hutchinson, Kansas, doing a general practice but devoting special attention to eye work, a feature which proved so successful that he decided to take the course offered by the New York Ophthalmic Hospital College.

Having completed his studies in New York he went to Boston in 1892 and has since devoted his time and attention to refraction and the diseases and surgery of the eye exclusively.

Doctor Suffa has done much original work in connection with the

motor mechanism of the eye, and has recently devised an improved method and instruments for measuring and tucking the ocular muscles.

At the present time he is ophthalmic surgeon to the Massachusetts Homœopathic Hospital, consulting oculist to the Westboro State Hospital, and a member of the American Institute of Homœopathy, of the Massachusetts Homœopathic Medical Society, of the Massachusetts Surgical and Gynæcological Society, and the Boston Homœopathic Medical Society.

The same energy and independence which made the man successful as a tiller of the soil, are characteristic of him to-day and augur well for the progress of the American Homœopathic Ophthalmological, Otological and Laryngological Society during his year of administration.

Urotropin Per Os Is Excreted in the Eye.—Urotropin is excreted into the anterior chamber of the eye in about three hours after ingestion per os, reaches its maximum excretion in about seven hours, and is excreted in great quantities after repeated paracentesis.

The excretion of urotropin into the anterior chamber of the eye is remarkably increased by the use of a mydriatic locally.

Urotropin in the aqueous humor in the concentration in which it occurs in the anterior chamber does not inhibit the growth of virulent organisms in the test tube.

Urotropin is secreted with the tears under about the same circumstances, through in less time and in slightly greater concentration than in aqueous humor. Also here there is no inhibitory effect upon the growth of virulent organisms in the test tube. The drug is not present in sufficient concentration to kill infecting organisms, but it will undoubtedly weaken them sufficiently to allow them to be more easily attacked and killed by the normal antibodies in the various secretions. This would be especially true in cases of perforating injury or post-operative infection where but few organisms gain admittance to the eye and where there is a constant change of aqueous humor, due to the opening of the anterior chamber. This must be worked out clinically as experimental proof of the problem is impossible, and the clinical testing is without danger to the patient.—Gradle, *Ophth. Rec.*, Mch., 1911.

SYMPOSIUM—EAR INFECTIONS.

BACTERIOLOGY AND PATHOLOGY OF MIDDLE EAR INFECTIONS.

EDWIN S. MUNSON, M. D.,

New York.

BACTERIOLOGY.

THIS paper, prepared at the request of the chairman of the symposium, does not contain the result of any original investigations but only aims to present the views of accepted authorities in this subject.

The normal middle ear is considered to be quite free of micro-organisms, as is also the fluid which collects in the condition known as hyperemia ex vacuo. Infection may gain entrance by several routes. From the external auditory canal when the membrana tympani is ruptured or incised and the natural barrier is broken down, which this offers when intact.

The Eustachian tube is the usual pathway, being not only easy of entrance but becoming also implicated in the pathological process.

More devious and less frequent routes of invasion may be by way of the blood and lymph vessels, fracture of the skull, or from the labyrinth, facial canal or the petrosquamous fissure.

In primary otitis media the following bacteria have been noted: streptococcus pyogenes, staphylococcus pyogenes aureus and albus, diplococcus lanceolatus, pneumobacillus, bacillus pyocyaneus, bacterium coli commune, influenza bacillus, typhoid bacillus, streptococcus erysipelatis, bacterium lactis aerogenes, Neisser's gonococcus, bacillus mucosus ozæne, tubercle bacillus, diphtheria bacillus, pest bacillus, meningococcus intracellularis, pseudodiphtheria bacillus, and bacillus mucosus capsulatus.

The secondary middle ear infections occur in the course of acute infectious diseases: as scarlet fever, measles, diphtheria, influenza, typhoid fever, cerebrospinal meningitis, etc.

In scarlet fever the streptococcus is the cause, according to Marie

Raskin and Leutert. The otitis appears early but the streptococcus soon loses its virulence and may be replaced by other bacteria. Korner divides scarlet fever otitis into two forms, an early destructive and a later mild one showing in the first stages of desquamation.

The streptococcus has also been found in measles, but the investigations have not been as thorough.

Throat diphtheria is often accompanied by acute otitis media in which the Klebs-Loeffler bacillus is found either in pure culture or with other pathogenic bacteria.

With influenza there are two forms: a specific or early form, in which the influenza bacillus has entered by the blood vessels and a later variety, a secondary infection from the throat. In the latter form diplococci, staphylococci and streptococci are found. It is said that in the otitis of influenza the pain may persist after rupture or incision.

Typhoid fever has otitis in two to four per cent. of the cases; it occurs usually in the fourth or fifth week.

In cerebrospinal meningitis the meningococcus intracellularis advances from the brain membranes to the inner ear along the auditory nerve or through the aqueductus cochleæ.

In the complications of otitis media the same bacteria are found as are present in the middle ear.

Staphylococcus is probably the most frequent cause of chronic supuration as it seems to be responsible for most of the secondary infections.

Streptococcus is the most virulent, but soon loses its virulency, while the diplococcus keeps this much longer.

Pneumococcus differs from streptococcus in that the acute process runs a quicker course with the former; it also has a greater inclination to extend its field of infection, and may often remain latent in the middle ear before it starts an acute process in the mastoid.

PATHOLOGY.

Inflammations are classified according to the character of the exudate: serous if fluid with few cellular elements; mucous when marked by mucoid degeneration of epithelium and mucous glands; purulent when filled with sufficient leucocytes to give a white or yellow color; fibrinous with a deposit of fibrin or coagulum.

Active hyperæmia is the first change, due to the dilatation of the blood vessels. This has a slowing of the blood current and allows

the exudate to form; the serum, the blood corpuscles and desquamated tissue cells are the elements composing the exudation.

The damage to the middle ear usually depends on the character of the exudation. Serous and mucous forms are not marked by as much tissue destruction as the purulent and fibrinous, and the absorption and return to normal is more rapid. Deposits on the membrana tympani and ossicles of fibrinous material, by their weight alone or by the formation of adhesions, impair the function of the middle ear.

When the exudation is not readily absorbed there may be growth of embryonic tissue which is transformed into adult connective tissue. This, forming bands, prevents the free movement of the conducting mechanism. Atrophic changes and calcareous deposits may take place. Anchylosis of the stapes, by calcification of the annular ligament or ossification of the new tissue surrounding the foot plate, may result.

8 W. 49th Street.

Iodine for Scleritis and Episcleritis.—E. R. Carpenter discovered that the pure tincture of iodine injected over the region involved would invariably clear up the condition in a short time and in no case failed to get a perfect result. Several physicians have seen this experiment, and were very much surprised at the rapid recovery. As one would expect a marked reaction takes place, but no sloughing occurs, and but little pain is experienced. I always use a five per cent. injection of cocain preceding the iodine, and the continuous use of ice applications for several hours afterwards.

All regions involved were cured at the end of a week or ten days. Any new appearance was immediately checked.

Probably there are cases of specific origin which should have special treatment, yet etiology did not seem to be an important factor. In two of these cases Carpenter noted the disappearance of small pterygium following the iodine treatment, and is now experimenting on the use of tincture of iodine in the treatment of this trouble, which he expects to report in a few months.—*Ophth. Rec.*, Mch., 1911.

Bismuth Paste.—Formula No. 1. Bismuth subnitrate (arsenic free), 1 part; Vaseline (yellow or white), 2 parts. M.

Formula No. 2. Bismuth subnitrate (arsenic free), 40 per cent.; Vaseline (white or yellow), 60 per cent.; Paraffin (120° melting point), 5 per cent.; White wax, 5 per cent. M.

TYPICAL AND ATYPICAL MASTOIDITIS.

GEORGE W. McDONALD, A. M., M. D.,

New York.

WHEN the word mastoiditis is mentioned it brings to mind a certain picture which, while varying in details in different cases, is, in the acute form of the disease, fairly constant in its essential features. The history of a preceding acute supuration of the middle ear followed within a few days or weeks by pain, swelling, redness and pressure, sensitiveness over the mastoid region, a protrusion of the auricle, especially noticeable from behind, with or without fever, are the salient features of an acute attack, easily recognized and for which an operation is usually the only remedy.

The atypical case does not present these characteristic symptoms and one may well hesitate in making a positive diagnosis, or in urging an immediate operation.

The following is the history of a typical case in which the symptoms were unmistakable and the necessity for operation unquestioned.

Mr. J., æt. 25, a civil engineer working in the Pennsylvania Railroad tunnel under the East river was attacked with grippe and, while hardly convalescent, returned to his duties, which took him into the compressed air chamber. He quickly developed an acute inflammation of the middle ear accompanied by intense pain. He was referred to me by his physician on the second day of the attack. I found the right drumhead intensely red and bulging. On the following day a free incision of the membrane was followed by a profuse discharge of blood and later of mucopurulent matter. Instead of diminishing, after the opening of the drumhead, pain steadily increased and the mastoid soon became red, swollen and very sensitive to touch. The patient was sent to the hospital and for forty-eight hours hot douches, hot antiphlogistine and leeches were employed in a vain attempt to control pain and reduce the inflammatory process. The mastoid was then opened and found full of pus, the entire process being involved down to the tip. The patient made a prompt and uneventful recovery.

Up to the time of seeing this case I had believed that mastoiditis would not occur in acute supuration if the case were seen from the beginning and free drainage established by thoroly opening the drum-

head. I no longer cherish that illusion, for this case was seen as early as one could expect to see a referred case. The infection must have been of a very virulent type.

The two cases following which I have ventured to call atypical were under treatment in the hospital at the same time which made them more unusual:

Mr. A., æt. 50, was taken with an acute suppuration of the middle ear for the treatment of which he sought the services of one of our members. After being treated for a short time he was advised that a mastoid operation was necessary to effect a cure. For financial reasons the operation was refused and the patient employed another aurist. Under his care the discharge ceased, the perforation closed and the redness of the drumhead disappeared. Not long after this happy result the patient complained of some pain of an intermittent character in the mastoid region. A third aurist was called in consultation and a diagnosis of neuralgia was made, as nothing in or about the ear pointed to mastoid empyema. The family physician, a homœopathist, was informed by the specialists, who were of the other school, that the case was now in his hands, as there was no further trouble with the ear and that internal remedies must be relied on for the relief of the neuralgic condition. The physician, not being able to effect a cure by careful prescribing, and finding a slight daily rise of temperature, asked me to examine the patient.

I found in bed a small, slightly built man, with a peculiar yellowish tinge to the skin. On account of the pain he had been unable to gain more than a few hours sleep in snatches for many days and was becoming exhausted. Examination of the drumhead of the affected ear showed no perforation nor was there any evidence of congestion. The mastoid was neither swollen nor red in the slightest degree. Only at the tip and on very strong pressure could I elicit the least sensitiveness, and this was exceedingly slight. The sternocleido muscle of the affected side was markedly rigid, but not sensitive to pressure. There was no fluctuation. Because of the rigidity of the muscle which I believed to be due to inflammation beneath it, together with the other symptoms, but more especially because his appearance impressed me as due to sepsis, I advised opening the mastoid, which was done the following day.

The cortex was intact. On opening the bone the cavity was found full of pus and granulation tissue. The carious process had exposed

the dura and lateral sinus over a considerable area. A perforation on the under surface of the tip permitted the escape of pus into the triangle of the neck, where was found a large cavity which also extended inward to the retropharyngeal region. It was quite a characteristic case of the so-called Bezold type of mastoiditis. From this cavity a large amount of pus and granulation masses was removed. A counter opening was made in the neck to facilitate drainage. Another fistula extended backward from the mastoid nearly to the median line of the occiput. At one time we feared there might be caries of the cervical vertebræ.

The treatment of this case was long and tedious. The patient was operated April 12, 1904. His morning temperature on that day was 97.2° . Following the operation his temperature ranged from 98° to 103° , once or twice dropping to 97° and once to 96° , until May 22d. During all this time there was a copious discharge of pus from three openings, one in the mastoid, another in the neck and the third in the occipital region. The cavities were repeatedly curetted and packed. The dressings were changed every second day and the cavities flushed. The discharge of pus showed no signs of diminution. The patient's condition varied from one of great restlessness with high fever and delirium to one of great prostration and profuse sweating, when his temperature dropped to 96° and 97° . During the latter attacks camphor 3x proved of great value. He also received strychnia 1/60 grain from one to three times daily, and whiskey at frequent intervals for many days in succession. From day to day it seemed as if he would succumb, for he was a frail man at best, and at this time weighed something less than a hundred pounds. From May 22d to June 5th his temperature ranged from 97.6° to 99° , once or twice reaching 100° . There was still a profuse discharge of pus but he was somewhat stronger and we felt more hopeful.

On the morning of June 5th at 8 A. M. his temperature was 99.2° , pulse 104, and respiration 24. At 6:15 P. M. his temperature was 104.6° , pulse 134, and respiration 34. He had erysipelas. This seemed like the last straw. The mastoid wound was still open and the dura and sinus exposed. The disease appeared on the side of the nose toward the operated ear. To prevent the spread of the inflammation to the open wound, pure carbolic acid was applied to the affected area, and quickly neutralized with alcohol as the skin became white. While the region of the wound did not become markedly involved, the dis-

ease spread to the other side of the face and thence over the scalp and down to the shoulders. The attack proved a blessing in disguise, for the suppuration was at once greatly reduced and, contrary to our expectations, continued to grow less as the erysipelas began to improve. By June 12th his temperature was again normal; on the 13th and 14th it ranged from 95.8° to 97° , jumping to 104° on the 15th, and gradually returning to normal on the 18th. From June 22d to 25th the range was from 96.6° to 97.6° . From then on to his discharge from the hospital in the middle of July his temperature was practically normal save for an occasional fall to 97° , which by this time had become such a common temperature in his case that we thought little of it. While the wounds in the neck and the occipital region were healed when he left the hospital, a small amount of discharge continued from the mastoid wound, which was now very small, until December. The man is now in good health except for periodical attacks of neuralgia from which he has suffered for many years.

The following history was furnished by Dr. M., a relative living with the patient, but not in charge of the case, which was under the care of the family physician:

Dr. O. B., a woman physician, in fair health except that she had long suffered from insomnia. "On the night of January 1, 1904, a dull pain began in the right ear, lasting off and on for three weeks with greater or less severity. Had profuse night sweats, but had had them occasionally before. Extreme prostration. All remedies and local applications failed to relieve pain. There was nothing in the ear to show any reason for the pain and no mastoid tenderness; on the contrary was better from pressure and kept her hand pressed to the mastoid. The pain left the right ear entirely and went to the left. This happened several times. Pain began at noon and lasted till midnight; later 5 P. M. to 5 A. M. Some days very little pain, others severe. Deafness was noted. Often examined ear when there was no pain whatever and then found canal and upper part of drum membrane intensely congested, but these conditions would entirely disappear during the paroxysm of pain. The air felt as it were being drawn directly into the tympanum, and there was a sensation as if a drop of liquid were running down the inside of the drum membrane. This caused intense itching with desire to scratch, and scratching caused pain. This symptom lasted many weeks. The next two weeks were almost free from pain except dull pressure from without inward

in both mastoids. On abstaining from all food except water and orange juice for one week was entirely free from pain except a dull pressure in mastoids, only on stooping. On February 7th pains suddenly became violent with symptoms of meningitis—sharp cries, rolling the head from side to side. Temperature 102° . Sleepless. Only half an hour's sleep in the twenty-four for weeks. Morphine made her decidedly worse. Pains relieved by hard pressure and heat. About February 10th pains left the mastoid and went to the occiput and deep in the brain. Were boring, crushing and rending in character. Pains frightful and persistent. The extreme severity lasted for several days followed by periods of exacerbation and amelioration. At this time was seen by an ear specialist. He found slight congestion of Shrapnell's membrane; no bulging; no mastoid tenderness; pain relieved by hard, deep pressure. Did not think there was enough trouble in the ear to account for the violence of the pain. Saw the case only once and wanted to keep it in view, but as the temperature became normal, and as he did not consider it a mastoid case, the family physician resumed charge of the patient. Another physician saw the case at this time and diagnosed 'rheumatism of the ossicles,' but later said they had agreed that it was a tumor of the brain. The diagnosis seemed to have been based mainly on the fact that the patient had had marked insomnia for the past three years. There was no history pointing to brain tumor, and no physical examination was made. The occiput began to swell on March 1st. A third physician made a diagnosis of malaria with glandular enlargement of the neck. By this time the swelling had moved from the occiput to the neck, becoming larger and larger, while the pain became less, tho at times severe. A fourth physician now saw the patient and concurred in the diagnosis of malaria, tho later he concluded it was sarcoma. The swelling on the neck interfered with breathing. At times cessation of breathing for a minute and a half at a time. Wakened with a gasp. Seemed only able to breathe by voluntary effort, ceasing to do so on falling in a doze. The first and fourth physicians in consultation agreed that the sarcoma had penetrated the skull and was the cause of the swelling in the neck, and that the condition was an inoperable one. Advised inhalations of chloroform for the relief of pain, as internal remedies had no effect and morphine aggravated the symptoms. On April 8th Dr. L. was asked to make a blood count and found a marked leucocytosis. He found some fluctuation behind the ear where the tissues had begun to

break down. With a hypodermic he withdrew some fluid, which proved to contain pus. Started to incise, but finding a deep abscess, decided it was probably a mastoid abscess, and advised calling an aurist. Two days later the family physician saw the case again. The swelling was very hard and the fluctuation was not so evident as on the former visit. He still insisted that the condition was an inoperable sarcoma which was breaking down."

On April 13th, three months and a half after the onset of the attack, I was asked to see the patient in consultation, but as the attending physician was taken ill, I got the history from the medical relative who had followed the case from the beginning, and to whom I am indebted for the above report. The patient seemed in the last stages of exhaustion, having taken little food and having had practically no sleep for a long time. On the right side of the neck there was a very large, hard swelling, with a soft central area where the abscess had begun to "point." The indications for opening the abscess were imperative, and as the patient was in such a weakened condition that the long trip to the hospital was not thought advisable, the abscess was freely opened at home and half a pint of pus removed. She slept four hours and a half that night, the first long sleep for weeks. Five days later she was removed to the hospital and the mastoid opened and found extensively diseased. The perforation had occurred at the tip. The drumhead was still intact and showed very slight evidence of congestion. The patient made a good recovery and has since had good health.

Iris Prolapse. If seen within two hours, the use of atropin or eserin (according to the position of the prolapse) aided by the repositor, will usually cause replacement; but replacement is hopeless twelve hours after the injury. According to the text books the prolapse should be excised; with this Percival does not agree. Excision will remove the tag, but will leave the lips of the corneal wound separated by the intruded iris stump, and a ready path is thus opened up for infection. His counsel is to leave the prolapse alone.

Regarding the use of **sugar in lime injuries**, saccharate of calcium cannot be formed by the application of sugar solution to the eye. The remedy is to remove every particle of lime and employ some simple lotion, such as boric lotion.—*Brit. Med. J.*, Oct. 22, 1910.

CHRONIC MASTOIDITIS, RADICAL OPERATION, EVACUATION OF A TEMPOROSPHEOIDAL BRAIN ABSCESS AND SEPTIC CEREBRITIS.

G. DEWAYNE HALLETT, M. D.,

New York.

MR. W. E. K., an iron worker, aged 29 years, came under treatment in the clinic of the N. Y. Ophthalmic Hospital in February, 1907, for a chronic purulent otitis of three months' duration.

Examination revealed a small perforation of the membrane, scanty, odorous discharge, and a small polyp which was removed and local treatment given for some three weeks.

During this time he complained of severe headaches indefinitely located in the frontal region and on the affected side, and he was admitted to the hospital for a radical mastoid operation, in the course of which the dura and sinus were exposed; they appeared normal. The labyrinth was not involved.

Following the operation instead of a clearing of symptoms there was some aggravation, together with some disorientation, and an examination of the eyes showed blurred edges of each optic disk with slightly dilated pupil on the affected side. The pulse and temperature curve did not aid in diagnosis. Four days later with further optic neuritis, the skull was trephined just posterior and above the meatus; the dura, lifted, presented no abnormality. Incising the dura, a knife was passed into the cerebral substance in three directions and about two ounces of pus evacuated from the temporosphenoidal region. Using a Whiting encephaloscope it was attempted to inspect the abscess cavity without satisfaction, but it served as an aid to passing a double strip of gauze.

Within twenty-four hours there was marked improvement in all his symptoms except the neuritis; the mental dullness entirely passed away, headaches subsided, appetite improved, and he expressed himself as feeling well.

The gauze was reinserted after two days and again once or twice but presently with some hernia cerebri this was not possible. The

hernia continuing it became necessary to repeatedly excise considerable masses of brain tissue.

The mental dullness returned, there was a loss of physical strength, the handgrip was weak, the neuritis extended and in coma death came in fourteen days.

Just preceding this there was a marked elevation of pulse and the temperature rose to over 105° F.

128 West 85th Street.

The Strabismus Hook in Extirpation of the Lacrimal Sac.—As a rule, in the operations which are done for chronic suppuration or mucocele of the sac, and these are the most frequent indications, the canaliculus has been slit previously, so that an ordinary strabismus hook can be inserted without difficulty. If the canaliculus is not slit, a small Stevens' hook will pass through it, if the punctum is dilated. Having been passed into the sac, the hook is turned so that the point is directed outward, and it may be readily felt in the wound by the finger, as it raises forward the anterior wall of the sac. With the instrument in place, the handle extending across the lower lid, there is no difficulty in re-inserting the speculum, and no distortion of the tissues in the area of operation. With the projecting point constantly in view, the position of the sac is readily determined, and the hook need not be removed until the sac is raised from its bed, and the operator is ready to cut it off above and below. The method is simple, does not delay the operation, requires no special instruments or injecting materials, and has made the operation much easier.

Another instrument which has proved of value in dissecting out the sac is a Graefe cataract knife, the point of which has been ground off, leaving a rounded end, the blade being about 20 mm. long. The cutting edge is used for making incisions, the back of the blade for dry dissection, and when the sac is well isolated, the blunt end is inserted into the lacrimal fossa and the sac separated from its attachments to the periosteum on either side, so that it can be drawn forward with a pair of forceps into the wound. With the same knife, or with a pair of curved scissors, the sac is then cut first above from the canaliculi, and below at its entrance into the bony canal; after curettement of the bony canal and insertion of the skin sutures the operation is completed.—E. A. Shumway, *Ann. of Ophth.*, July, 1911.

A BRAIN ABSCESS CASE.

ALTON G. WARNER, M. D.,

Brooklyn-New York.

MRS. C——, age 31, was admitted to Jamaica Hospital April 16, 1910, on account of intense pain in the right ear and side of the head. The pain had existed for five or six weeks increasing in severity. There had been a discharge from the ear "for a long time."

This meager and indefinite history was all that could be obtained. Examination disclosed a foul discharge from the right ear. There was tenderness over the mastoid but no swelling or redness. Temperature was 100.5, pulse 104. There was no choked disc nor any paralysis. The patient was rather apathetic though she complained of the pain. Diagnosis, mastoiditis with probably brain abscess though the pulse was not that of brain pressure. The mastoid antrum was opened at once by the usual method. It was filled with pus and granulations. The lateral sinus was exposed for a considerable extent, as the bone covering it was badly necrosed. In spite of extreme care the sinus wall was ruptured. This occurred not from being torn or cut but from pressure with the smooth surface of a Kerrison rongeur. Very free bleeding followed. This, with the fact that the patient was taking the anæsthetic badly made it necessary to discontinue the operation. The sinus was packed and the wound dressed with the expectation of completing the operation the next day. April 17, sixteen hours after operation, pulse and temperature normal; patient is free from pain and wants to get up. Operation postponed. This improvement continued forty-eight hours when the patient suddenly went into collapse and died before I could reach the hospital. I am indebted to Dr. Lloyd for assistance at the operation and for the notes of the autopsy which he performed.

AUTOPSY.

Cerebral abscess of the right temporosphenoidal lobe. Cavity was about two inches long by one-half inch in other dimensions. The long axis coincides with the long axis of the brain. The abscess had rup-

tured into the posterior horn of the right ventricle about one inch posterior to junction with descending horn. The tegmen tympani was dark in color and the dura over this spot was discolored. The lateral sinus wall, externally, appeared normal except the tear; internally it was dark greenish in color for an inch along that part which is in relation with the mastoid. This discoloration was associated with actual thinning of the wall and the tissue was very friable. There was a clot of recent formation and no pus. There are several features about this case that seem of interest. First, that with an abscess of this size and at this stage it was peculiar not to have a slow pulse. Second, there was no general infection through the sinus though the wall was friable in the extreme. Third, the surprising temporary relief after cleaning out the mastoid although the cerebral abscess had not been drained at all. This relief was so complete as to indicate that there was no brain complication.

10 Sehermerhorn St.

DISCUSSION.

RALPH I. LLOYD: "There is a type of case which does not receive the attention it deserves." If a middle ear infection is painful it receives attention, if the mastoid becomes involved we are interested indeed. But I would call to your attention the fact that the middle ear is a party to infections of the brain without marked evidence of ear involvement and certainly without mastoid inflammation. All of us have been called to see a patient, usually a child, suffering with bronchitis. The fever is not high, but the child looks sick. There may be an earache, but not severe. Inspection of the drum shows a slight injection usually near the top. We do not feel justified in puncturing and are pleased to hear that attention to the nose and hot irrigations of the ear have relieved.

A few days later we hear that the child is a victim of meningitis. Many of these cases are of the posterior basic type and are frequently classified as tubercular. On account of the amount of time and money required, together with the inability to get autopsies, we are compelled to let it go at that. In this connection, let me mention that Drs. Lees and Barlow have performed autopsies on fifty cases of posterior basic meningitis in which there was no evidence of tubercle, and in those cases examined bacteriologically the pneumococcus was most frequently present. Of this group, the middle ears were normal in nine cases, not examined or not mentioned in nine cases; in twenty-five cases both ears were infected and in seven cases one ear was infected. Time was when a macroscopic line of infection was necessary to convince, but now we know septic emboli may pass by way of the blood vessels, and what is more important to my mind, lymphatic spread is recognized.

At present, we are helpless in cases of this kind; by the time the case has definitely passed into this group it is too late to do anything. With better hospital equipment and better pathological facilities we may solve this problem.

G. A. SHEPARD: Dr. McDowell's case is of interest to us as he was under my care until I advised that the mastoid be opened. The patient had been under my care for a year or two for nervous headaches from which he had suffered for years. For the acute condition I made a free incision of the membrane and evacuated the pus in moderate amount. Continued pain, with marked swelling of the tympanic mucous membrane indicated to me mastoid involvement tho there were no external signs.

E. L. MANN: Dr. McDowell's paper recalls what was a very interesting case to me; it was not under my care. The patient, a boy, was sent from the country to have the radical mastoid operation performed upon the right ear. It was done and the patient did well. One morning he told the specialist that he had a peculiar feeling in his head—he shook his head and it made twitching of the facial muscles on the left side; this continued and increased. Every time he bent over or shook his head the twitching occurred. The drum membrane showed no signs of trouble but they found two sequestra of bone, one in the region of the Fallopian canal. This was probably the cause of the twitching; it was on the side the ear of which had not troubled him at all. That was the peculiarity of the case. There was nothing to indicate any trouble on that side until he began to complain of the twitching. I saw him three weeks ago, he was just recovering from facial paralysis the result of the operation. He had tubercular infection.

E. D. BROOKS: I am reminded of a case that came into my hands for treatment some time ago. There had been an operation for mastoid disease, in which the sinus had been uncovered. The symptoms so far as temperature was concerned, were similar to those of Dr. McDowell's case: it would fall to 96° or 97° and be accompanied by a severe chill, followed by a rapid rise and restlessness. I watched the case a short time and my judgment was that septic material from the sinus was being carried into the general circulation. I gave pulsatilla and the patient recovered, much to the surprise of the attendants, the family and myself. Whether my judgment was correct or not I shall never know.

DR. LLOYD: I had an unusual experience with a lady patient who had had an ossicullectomy after which there continued to be some discharge from the attic. She complained of numb spots in area supplied by ophthalmic division of the 5th nerve. This cleared up very promptly. Three months later she walked with difficulty. It started apparently from a scare, while taking a walk in the country whither she had gone. At that time her legs collapsed. There followed numbness of the hands and incoördination so that she could not play the piano as before. With

the spread of the symptoms my original theory of infection of meninges seemed to crumple up and I sent her to Dr. J. E. Wilson, who made a diagnosis of multiple sclerosis. Subsequent history has confirmed the diagnosis.

BURTON HASELTINE: A discussion of atypical cases of mastoiditis is interesting, both to general men and specialists; either may be called upon to make a diagnosis. Too often we are called to operate for mastoid infection and find either a long neglected case or one that is not a true mastoiditis at all. Cerebral complications in advanced stages, such as are so often seen in large charity hospitals, are generally recognized easily. In private practice we see them earlier when the diagnosis is often difficult.

I am always suspicious of cases with a history of infection about the head, where the patient is slow in regaining strength, especially if he suffer vague and persistent headache.

DR. WARNER: I hoped very much that somebody in the discussion would throw some light on that case of mine which was so relieved in its symptoms by cleaning out the mastoid when I had no expectation that such would be the case. I did not believe that she would be relieved because I thought that she had brain abscess. My previous idea and experience were that relief came to such a case only when the abscess was cleaned out. Cases seen very early and a drumhead incision made promptly, which yet come back, bring to mind a case which I reported ten years ago for this society. I did a drumhead incision within eight hours of the primary symptoms and there was a discharge of pus without relief of the pain. The discharge continued until the patient was operated on and a brain abscess found and that was only five days from the original earache. Dr. Shepard saw the case with me and agreed that there was an abscess at the bottom of the trouble, but the friends and relatives would not consent to an operation until too late; the child died. No relief of pain in the head from lenses or from drum head operation shows serious trouble deep in. One of our men in Brooklyn fully alive to the dangers of neglected ear troubles had a little boy, aged four years, who did not seem to be very sick; there was a slight fever. He prescribed for him; the temperature went higher, and the child seemed worse. For several days the temperature ran an irregular course, but generally high in the evening and lower in the morning. He diagnosed malarial fever, but quinine did no good whatever. The ear of the child happened to be accidentally and lightly touched and the child said, ouch! There had not been one word said to call attention to the ear before this. By this time the fever went up to 103° , there was pain on touching the external ear, but he made no complaint otherwise. On examination, the canal was found to be full of serum. He put the child under chloroform, removed the serum and made a drumhead incision. There was free discharge from the ear and the temperature went down immediately, but not quite to normal. On

the second day afterward there was tenderness over the mastoid region. Operation was performed and revealed extensive necrosis of the mastoid bone. There was never a symptom or a sign that there was any trouble in the ear from first to last. The doctor was rather humiliated.

DR. MACKENZIE: I would like to answer the doctor's question: he raised the point about his patient afflicted with mastoiditis and also having a cerebral abscess. I think it is explained by the fact that an abscess of the brain passes through several stages, the initial stage, the latent stage, which may last for a long time, the manifest stage and the final stage. It is quite possible that when the doctor operated the abscess was in the latent stage and when he cleaned out the mastoid trouble it precipitated the abscess. The abscess was in the temporal lobe on the right side and in that situation does not produce any peculiar symptoms, only the general symptoms of all abscesses of the brain. There is tabulated in MacEwen's work and in the latter part of Koerner's book the location and source of the various symptoms that may be produced by abscess of the brain. In a great many of the cerebral abscesses you will have, as pointed out by Politzer, extradural abscesses. The temporal lobe is more apt to be affected in young people because of dehiscence in the tegmen tympani, or we can get infection through the veins and through the lymphatics from one side of the bone to the other.

DR. WARNER: That is very plausible, but this case was somewhat peculiar. This patient had extremely severe, continuous pain; no pure mastoid case ever had so atrocious pain. I do not believe that it was due to the mastoid condition, but to the brain abscess. Yet the mastoid operation relieved the pain.

Laryngeal Tuberculosis. Systematic examination of larynx in cases of pulmonary tuberculosis in order to detect laryngeal trouble early. Local treatment in febrile or complicated cases and cases with active lung disease should be conservative: functional rest of larynx, antiseptics of nose, mouth, and pharynx, insufflations of powders containing orthoform or morphine, instillations of oily preparations, *e. g.*, orthoform and menthol, of each, 2.5 to 5 gm. ($37\frac{1}{2}$ to 75 grains), in oil of sweet almonds and olive oil, of each, 50 gm. ($1\frac{1}{2}$ ounces). Cocain solutions before meals, and injection of alcohol into superior laryngeal nerve, also available. In afebrile cases cauterization, curettage, or excision of diseased tissues may be tried. Tuberculin to be used only with extreme caution.—*Schröder*.

SYMPOSIUM VI.—ETHMOIDITIS.*

DISCUSSION.

J. I. DOWLING: It is a pleasure to commend Doctor Townsend's excellent paper on Ethmoiditis for it is thoro and serves to suggest many important items relative to ethmoiditis and allied conditions of other accessory nasal sinuses. I wish to emphasize his suggestion that such terms as "cold in the head" and "rhinitis" be dropped for the more definite scholarly terms used by specialists. The symptoms of ethmoiditis are sufficiently clear in themselves to permit a provisional diagnosis which often proves correct upon further investigation.

The symptoms of fullness between the eyes and over the bridge of the nose invariably indicate some involvement of the ethmoid cells which may vary from congestion to actual empyema. Another symptom is positive pain behind the eyes, for which oculists so frequently prescribe glasses and then fail to relieve. Muddiness of vision, transient mist, floating spots before the eyes, erratic muscular disturbance of the eyes are all indicative of ethmoid disease, and the rhinologist may frequently cure longstanding troubles supposedly of ocular origin in which well trained oculists have failed to succeed.

The treatment of ethmoiditis varies according to the variety. A simple condition of hyperemia or mild catarrhal state is frequently treated and relieved by the use of adrenalin and cocain, as Dr. Townsend states. I merely repeat his statement in order to emphasize the need of caution in the use of cocain. My personal use of this drug is confined almost entirely to operative cases and in some cases for diagnostic purposes. In making use of the drug I endeavor to prevent the patient having any knowledge of what is being employed. I believe that we should attempt to educate the laity and physicians in general practice as to its dangers, particularly in that variety of inflammation in which turgescence of the erectile tissues and congestion are the main symptoms.

In the past ten years I have had two deaths following operations upon the ethmoid cells, both cases being infections of streptococcic variety in pure culture. Ballenger recently reported a death from this same cause, his explanation being a pre-existing meningitis which was rendered acute by the operation. Be this as it may, the fact remains that operations upon the ethmoid region are among the most serious and dangerous of nasal operations. Grünwald many years ago emphasized the fact that it is in this variety of cases that death or blindness is possible from operative interference.

Concerning the method of treatment which I have devised and to

*The papers were published in September and November, 1911.

which Dr. Townsend refers, I can merely emphasize again what I have stated in previous writings that the value of the method is so great that ultimately the majority of rhinologists must perforce make use of it. To secure results, however, a perfect technique is essential. That which I devised and which I deem the best is the insertion of tampons wrapped about a small wire probe and introduced well up into the nares between the turbinated bodies and septum with the final step upon withdrawing the probe of gently forcing the anterior end of the tampon up into the infundibulum. Persistently pursued this method not alone relieves congestion and turgescence but actually reduces the size of the turbinated tissues and proximate parts so that satisfactory drainage is afforded the accessory cells and sinuses. This naturally permits a cure of many conditions which heretofore have proven intractable. The strength of the argyrol solution which I employ is forty grains to the ounce.

H. A. FOSTER: A case of mine presented some points of interest in this line; there was suppurative sinusitis, ethmoiditis, and atrophic rhinitis to the extent of the inferior turbinated body being entirely gone. The patient was thirty years old and had had sinusitis since the age of ten. The cause of the trouble seemed to have been a deflected septum. I did a resection regardless of the pus followed by using the argyrol tampon. The trouble cleared up with remarkable rapidity. I kept up the argyrol tampons for six months; the pus is now entirely gone, the membrane in good condition and the middle turbinal is hypertrophied to compensate for the inferior which is missing. In sinusitis I am now applying white vaseline, about a dram, to either side and then putting the head fifteen inches lower than the body for fifteen minutes; the frequency with which this is used is in accordance with the intensity of the condition, from an interval of a few hours to once a day. The white vaseline seems to me a particularly good remedy in such nasal conditions as it has acted beautifully for me in a number of cases.

W. H. PHILLIPS: In my own work it has been my fortune to run across a considerable amount of ethmoidal disease. The Dowling tampon as I understand it is used by Dr. Dowling only for purposes of diagnosis. I did not understand that he claimed any curative effect from it. I have used it in a number of cases, however, for treatment. Possibly I have seen good results from it in acute ethmoiditis, but certainly I have seen no effect in chronic ethmoiditis. I had the opportunity of hearing Dr. Ballenger report the case of primary meningitis cited here and I questioned at the time whether he had primary meningitis. When we remember that it is difficult to do an ethmoid operation in a smooth manner to its deep situation and the free hemorrhage and that it is impossible to remove completely every tag of tissue, and in addition that we most often have to pack the cavity, we can readily realize how a streptococcic, staphylococcic or pneumococcic infection may be transferred through operative interference to intracranial tissues.

Stuckey, of Louisville, reported some twelve cases of meningitis following the radical operation for ethmoiditis occurring in his practice within a year, and it seemed to me that such results must have been due to some fault in the operation; so many cases in a year looks as if something was wrong in Louisville and it might be a good place to keep away from if one has this disease. I have got away from the older method of snaring off the middle turbinated and curetting these cases as spoken of by Dr. Townsend; instead I use Ballenger's knife. Although this sacrifices almost all of the middle turbinal, still I consider it an improvement over the old method; there is less reaction and better results than with the curette, snare and scissors.

Some years ago I became interested in the question of the vaccines; I spent some weeks in learning how to make autogenous vaccines and I have been making them in my own office since. My results have been quite satisfactory.

I have found their greatest value to lie in two directions: first—used for two or three weeks prior to operation a resistance is created in the patient which largely precludes extension of the infection following operation; and, second—used after operation they aid materially in clearing up the case.

In those cases where my comparative inexperience in vaccine work does not allow me to culture out the infecting agent with certainty I have been in the habit of using urotropin prior to operation, according to Cushing's method.

C. W. MACKENZIE: I wish to mention some points in the microscopic anatomy of the nose. Zukerkandl, who studied the sinuses in detail published a most comprehensive work in two volumes on the anatomy of the sinuses; it is remarkable to see how many errors he made in the microscopic anatomy of the part. Most of the specimens that he worked with were from adults and oftentimes there were pathological changes in the mucous membranes which he put down as normal. He showed the basement membrane stained red much too thick, whereas in normal specimens it is thin and stains red with difficulty; in pathological conditions it is thickened and takes the red stain easily. There are many other errors.

Uffenord has been quoted freely, and I give him credit for good work. I was impressed with Dr. Palmer's paper where he quoted Uffenord in speaking of the communication of the nasal vessels with the outer surfaces thru the bone. That is a fact that was brought out long since by Macewen in 1893 in his work on infectious diseases of the brain and cord. We find corroborative evidence of this in frontal sinusitis and maxillary sinusitis in the edema due to pressure upon the anastomosing veins, with swelling and sometimes redness. There is evidence of a similar thing on the external side of the ethmoidal labyrinth. Such a communication between the internal and external tables of bone is exemplified in the communicating veins of Santorini.

I am in favor of using cocain in making our examinations. In cases of sinusitis we must examine the patient's nasal cavity thoroly in order to find any evidence of pus; the cavity involved may contain pus but the pus be invisible because the ostium is blocked up by swelling of the mucous membrane, or it may be present at certain times of day and not at others.

By the use of cocain we can often find a drop or two because by reducing the swelling it permits the pus to issue thru the ostium. I prefer not to use adrenalin. If we find the pus and locate its source accurately it is oftentimes surprising to see the quick results that are obtained from treatment. There are cases that tend to become chronic and the thing that is prone to make them so is the fact that the floor of the sinus is, owing to an anatomical peculiarity, below the ostium so that the pus collects there; ordinary conservative treatment does not go well with such cases. In obstinate cases we should look for this variation from the average form.

BURTON HASELTINE: I recently read a paper before the Wisconsin State Society reporting the results in six cases operated for the radical cure of atrophic rhinitis. The operation consists in the most complete possible removal of the ethmoid labyrinth. The treatment is persistent careful cleansing of the empty cavities until a new mucous lining can form. I have demonstrated that in certain long standing cases of typical atrophic rhinitis a cure by this means is possible. I have seen cases as long as two years after all treatment was stopped, without crusts, odor or discharge. I am convinced that we must forget all our old ideas of this dreadful disease and begin to look upon it as a surgical condition curable by proper measures.

The radical ethmoid operation is a difficult procedure with great possible danger and should not be undertaken by the tyro. It is emphatically a hospital operation and should not be made in what I call the barber shop style of surgery. While I have never had meningeal complications I am keenly alive to their possibility. My advice is never to pack unless compelled to do so by serious hemorrhage. The subsequent cleaning is important and should be done with the utmost care and thoroughness.

DR. PHILLIPS: I have had some experiences in not packing these cases after using Ballenger's knife. The first case I operated on in that way I did not pack because in the case I saw Ballenger demonstrate he did not pack. I was called out in the middle of the night to see that case to stop a hemorrhage. I never want to get again into the mess that I was in that night. The case was apparently thoroly cleaned out, there were no shreds or tags of tissue left in the cavity and I am sure that there were no clots left. There was such a loss of blood that the patient was confined to bed for a week afterward and was three or four weeks recovering from the loss of blood. I tried it again later and with the same result so I am not in favor of leaving it unpacked.

DR. MACKENZIE: Dr. Palmer referred to edema of the septum high up; I have done a number of submucous resections and it frequently happens that in our packing the nose and applying the two layers of mucous membrane together we fail to apply the mucous membrane high up; as a result we get a small hematoma formed there. If you sink your knife into it there will be a few drops of dark blood come out. In traumatic contusions and fractures you get the same bilateral swelling due to hematoma and there is a possibility of a spreading infection to the lamina cribrosa. It should be looked for and if present punctured with a knife on both sides.

DR. HASELTINE: I hope that nobody will understand me as condemning packing when hemorrhage actually occurs; I do not.

DR. TOWNSEND: Packing is a question of the surroundings of the patient; if your case is in a hospital where there are people constantly around, capable of taking care of any accident, packing is not necessary.

DR. HASELTINE: Then you should not do it.

DR. TOWNSEND: I do not use cocain, I use stovain in its place. In acute cases I apply it and leave some with the patient for repeated applications in order to keep up drainage. There is no danger of drug habit being acquired because it is used for a few days only. By means of this alkaloid we have a means of securing early drainage which is very important. Thus they are cured up in the first stage while readily curable.

A. W. PALMER: I want to shake hands with the president for insisting that these surgical procedures on the nose should not be considered barber shop operations and should be taken to a hospital where they can be properly attended to. The laity, the general profession and even some of the specialists are not careful enough in this respect. This region of the nares being so intimately connected, thru the blood vessels and lymph channels, with the orbital and cerebral cavities, infection of their contents is prone to occur. Keeping the patient in the hospital, in a horizontal position, obviates the necessity of packing the nares tightly, which is another not infrequent cause of infection of the adjacent sinuses. Instead of packing, after cleaning the operative field thoroly, I inject ten or fifteen drops of pure hydrogen dioxide, wipe away the superficial suds,—repeat this five or six times at intervals of fifteen or twenty seconds. This gives successive coats of coagulated albumin over the raw surface and serves as a natural plug; it is quite aseptic. When the bleeding comes from a number of small vessels I use with success five drops of the tincture of *thlaspi bursa pastoris* once in two hours. It seems to help where there is a predisposition to hemorrhage.

In acute ethmoiditis which you so often meet after grip I use a douch of hot water, letting it run through the nose for ten or twelve minutes. You will find that it reduces the congested blood vessels and holds them down with great relief to the patient. A vapor of the compound tinc-

ture of benzoin is excellent. I would like to ask Dr. MacKenzie if he dislikes adrenalin on account of the reaction.

DR. MACKENZIE: The adrenalin of Parke, Davis & Company contains a preservative, and independent of the preservative you get a reaction anyhow. I have used it and found that it caused considerable distress to the patient; they complain of burning where it is applied. With a 20 per cent. solution of cocain there is no complaint whatever and it serves just as well.

DEAN W. MYERS: In regard to the suprarenalin extract, I am a great believer in it, and use it instead of cocain for examination in all cases. For several years I have used a preparation made without preservative of any kind. It may be obtained in dram vials at the same price as in ounce bottles and in this way you may open one bottle at a time as needed and the other seven vials are always fresh. I do not find it irritating, and from my experience it is far preferable to cocain.

H. S. WEAVER: I have for several years given the preference to the preparation made by Armour & Company called suprarenalin, on account of its being less irritating. The adrenalin will in many cases cause excruciating pain; I have had several cases where the pain was awful.

DR. PALMER: I have not noticed much difference between the different preparations.

The extract of the pituitary body raises the tone of the cardiac muscle, but does not increase its rate, and while producing a constriction of nearly all the arterioles in the body, produces a dilatation of those of the kidney. An increased secretion of urine is likely to result from this. The pituitary extract also contains a depressor substance which diminishes the tone of the heart and lowers the arterial pressure.

Primary Heart Failure in Normal Subjects Under Ether.—Death of ether patients from cardiac failure is nearly always due to faulty methods of anesthesia, not at the time of death, or five minutes before, but from one-half to three-quarters of an hour earlier. It is especially light, incomplete, and intermittent etherization which induces proneness to sudden death. This was proved by laboratory experiments on animals and by observation of fatalities in human beings. This may explain some of the sudden deaths in adenoid operations where the anesthesia is incomplete and intermittent. Any prolonged light anesthesia, with stages of excitement on the part of the patient, involves great danger of sudden cardiac failure.

OPHTHALMIC PROBLEMS IN GENERAL PRACTICE.

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THIS subject was chosen because it permits the broad treatment appropriate to a gathering of general physicians, and because it affords opportunities for some practical suggestions. I have no sympathy with the specialist who presents in a meeting of this kind a strictly technical essay; he had far better sit in the corner and make a noise like a tomb. The practice of the oculist being largely consulting, he often observes cases in which the family physician has overlooked some important symptom or has noticed the symptom but failed to realize its significance. Therefore, my object this evening is to discuss just those problems which are sometimes a stumbling block for the general medical practitioner; I hope to offer some useful advice, without rupturing my intellectual perineum.

Let us first consider those patients who, after several weeks of unsuccessful treatment for **headache**, are finally cured by appropriate lenses or prisms. It is a fact that these patients are commonly referred to the oculist as a last resort. It is also a fact that they sometimes bitterly criticise their physician for not suggesting the eye examination; and under the circumstances they feel that their criticism is justified, tho in fact the eye symptoms have been vague or apparently absent. A case of this kind occurred in my own family; so I can fully appreciate how easily the relation of eye strain to headache may remain for a long time unsuspected.

How then are you to determine whether headache is of ophthalmic origin? Certain well chosen questions will lead to a correct diagnosis in most cases. Those questions are: (1) Does the headache follow an hour's sewing or reading, or other close application of the eyes? (2) Do you wake with headache, after having used the eyes the previous evening? (3) Do you suffer any headache or eyache at the theater, or after coming out? (4) Do you get a headache if you go shopping? (5) Are you sensitive to the light of a bright sunny day, or to arti-

ficial light? An affirmative answer to any one of these questions should direct suspicion to the eyes, while an affirmative answer to any two of them is proof that the eyes need attention. Particularly significant are the theater and shopping headache, while habitual photophobia, even tho slight, spells decided eye strain. This symptom is of far greater significance than generally realized, and is too often dismissed as simply neurasthenic. Show me one thousand people who wince on bright days, and who need protective glasses at the seashore, and I will show you nine hundred and fifty persons whose retinæ are congested as a result of strain from some refractive error.

Physicians, and parents as well, are inclined to make light of a child's complaint of eye fatigue or headache. Now as a matter of fact, I have never examined the eyes of a child who thus complained, without finding good and sufficient reason. Children do have "stomach-aches" when they believe it to their advantage—as for instance just before school, with a marvelous recovery by half past nine. But children as a rule *do not know* that eyes cause pain. Do not neglect a repeated complaint about the eyes.

The questions already mentioned are equally helpful in searching for a possible ophthalmic factor in any functional nervous disease. Please note that I said *factor*, and not cause. I am not one of those extremists who consider the eyes to be the hub about which revolves the nervous system, the stomach and the uterus. Nor do I believe that eye strain *alone* causes neurasthenia or chorea or indigestion. But we *do* know that in given cases of any neurosis the correction of eye strain may be vitally important. We know this is true, because it has been demonstrated. Gowers always advises ocular examinations in cases of epilepsy, and states that "visual warning is twice as frequent as all the other special sense auræ together."

In any nervous disease where it is desirable to eliminate ocular influence, absolute rest of the eyes by atropin will accomplish this object; the patient who feels better while under the cycloplegic may expect permanent relief from correct ocular attention.

Let us now consider a disease which is poorly understood by the profession at large, and concerning which even the best physicians have been known to give the worst kind of advice; that disease is **strabismus**. Some cases are easily corrected; other cases present one of the deepest problems in medicine, and demand time and skill and patience, from the oculist and the parents, in order that the feeble

fusion sense be developed. Physicians have done many children great harm by telling the parents to wait and see if the child would outgrow it; to wait until the child is seven years old; that an operation is necessary or unnecessary, as they happen to believe. This subject is extensive enough to demand text books entirely devoted to its problems, but a few basic principles are within the scope of this paper. Binocular vision is so desirable that it will be maintained at the expense of severest strain; therefore a deviating eye commonly indicates muscular strain pushed to exhaustion. It may also indicate a low visual acuity due to congenital defect, to high degree of refractive error or some other cause. It may also be paralytic in origin. Therefore each case must be analyzed; until this has been done, and its specific cause discovered, no intelligent advice is possible.

Nystagmus is of much significance. When occurring in the young it *always* denotes very poor vision. It indicates a lack of voluntary control of the eye muscles because of feeble retinal and cortical impressions. The ability to fix the eyes steadily upon any object is not inborn but is acquired simultaneously with intelligent vision. Hence if there is no intelligent vision there can be no accurate fixation. Its immediate cause is most frequently corneal opacity secondary to ophthalmia neonatorum. Other causes are extreme refractive errors or some congenital ocular defect, such as lamellar cataract or arrested development. Much may be done for some of these cases if seen early. The longer they go without attention the less they can hope for; therefore advise accordingly.

Nystagmus developing in adults is evidence of organic disease. It has been observed in all varieties of meningitis, in cerebral hemorrhage, sinus thrombosis, lesions of the pons and optic thalamus, and in spinal degenerations. According to Gowers "its significance is of great practical importance, because it indicates *more than a function disturbance*—tho not necessarily its location—and it may be trusted without hesitation in diagnosis."

Nystagmus is seen occasionally in miners, who work in a poor light and with the eyes in a strained position. These cases may recover if they abandon their work; this is the only variety of nystagmus in otherwise healthy subjects.

Let us now consider the commoner accidents and emergencies, which of course arise without warning, and which urgently need prompt and skillful attention. **Burns** of the eyeball are always serious. Their

danger to the vision is determined by the injury to the cornea. Should the cornea escape, the principal complication to be prevented is the formation of adhesions between the lid and the eyeball; this is accomplished by breaking up, under cocain, all adhesions and by keeping the raw surfaces apart as much as possible by the use of olive oil or other suitable medium. Should the cornea be involved the case is most dangerous. A superficially burned cornea is gray; a deeply burned cornea is white, and scars are sure to remain. If the burn has been caused by lime or other strong alkali remove it, under cocain, by wiping with cotton on an applicator, being careful to wipe well up under the lid, or you may flush the eye generously with olive oil, sweet almond oil, milk or a weak solution of vinegar. A strong solution of sugar is also good, because cane sugar forms with lime an insoluble compound. Never in the excitement of the moment, forget that the use of *water* in lime burns, would make matters far worse. Burns from acids are best neutralized by a solution of carbonate of soda (1% to 5%), after which olive oil may be dropped between the lids. Cold compresses will aid in restraining inflammation, and should be applied in all cases. Burns from the explosion of powder are generally superficial and very painful; because of the lowered vitality of the corneal epithelium it is not wise to be hasty in removing the powder grains themselves. It is safer to wait until the cornea is in better condition for instrumentation. The powder itself is almost always sterilized by the explosion, and its presence causes little reaction.

Heavy blows upon the eye often cause a hemorrhage that partly or completely fills the anterior chamber. This hemorrhage in itself is not a serious matter, because it will undergo absorption. But while it conceals the extent of the injury it is unwise to make any definite diagnosis; there may be a ruptured iris, or a dislocated lens. Cases like this are best treated with arnica, both locally and internally. No other remedy will so hasten the absorption of the blood.

Injuries **that puncture the eyeball** are invariably dangerous, even tho slight in extent, because of the possible infection; only time will tell what is going to happen. I have seen a tiny puncture cause panophthalmitis, while on the other hand a cut nearly an inch long, thru which the iris protruded extensively, healed with no loss of vision. In all traumatic cases examine the pupil very carefully, comparing it with the other; if it reacts promptly to light and is *perfectly round* and *black*, it presents pretty strong evidence that there is no perforation.

If however it is distorted and if the iris appears to lie close up against the cornea, perforation is indicated. The patient should be kept absolutely quiet, flat on his back, and ice cold compresses applied, being particularly careful that they make no pressure upon the eyeball. It goes without saying that no family physician should rely upon his own judgment in such cases, but that the oculist should be consulted as soon as possible. Unless forced by circumstances to assume the responsibility, avoid using atropin or eserine or other powerful drug. A day's delay is less dangerous than the wrong treatment.

Possibly the most practical part of this discussion applies to those **apparently slight inflammations** which are in reality dangerous and in treating which a mistake means serious trouble for all concerned. These cases are not so infrequent as you might suppose. The commonest error, is the failure to recognize **iritis**. Sometimes the very best physicians are misled and consider the case simply one of pink eye. Every such case in my experience presented just one peculiarity, namely the *absence of pain*, and *this* one peculiarity deceived the physician.

Forget the text books and remember that iritis, and even glaucoma, is sometimes painless. I am convinced that the text book descriptions of these diseases are to blame for much misinformation. The painfulness of iritis, or glaucoma, has always been so vividly described, and this characteristic symptom so prominently set forth that the physician can hardly imagine a case of either disease in which suffering is not a marked feature. Therefore *do not be deceived by the absence of pain*. On the other hand, severe pain in the eye is positive evidence of something serious. Even tho the eye may appear healthy, do not take any chances until you know what's the trouble. The eyes may be exactly alike in color, size of pupil, etc., but even these facts should not lead one into a false diagnosis of simple neuralgia.

To sum up:

Absence of pain is of no diagnostic value.

Presence of pain is positive proof of disease.

Let us suppose that one of your patients consults you about an acute ophthalmia; you must assume the responsibility of deciding whether the case is trivial or serious. Permit me again to remind you that absence of pain is not always absence of danger. On the other hand, if there is severe pain you will almost certainly find corneal or iritic inflammation. It might also be due to glaucoma. Always test the vision.

If you have no regular chart, use the various size letters in any newspaper, or anything else that is handy, testing at a distance of fifteen or twenty feet. Compare the eyes, trying the affected one first. Such a visual test is not of course highly scientific or conclusive, but it is of great practical value. Should the vision of the affected eye be less than the sound one you must suspect something serious. Conjunctivitis alone may cause some blurring, but this can be temporarily removed by winking and thus clearing the cornea of mucus. Blurring which cannot be thus removed, suggests some deeper trouble. Iritis usually reduces the visual acuity because the aqueous has become turbid. On the other hand iritis may not affect the vision at all; and this is equally true of glaucoma. You will therefore appreciate the fact that even serious disease does not *always* cause loss of vision.

When you actually **examine the eye** do not go about it in a haphazard fashion, but search for certain definite facts; these are few but vital. First—Is the cornea perfectly transparent, uniformly brilliant and its surface free from *even the tiniest spot*? Second—Is the pupil *perfectly round*? Third—Is the pupil jet black? Fourth—Does the pupil react *instantly* to light? If you can determine these facts with certainty, you will never make a serious mistake in any acute case. Any eye in which these conditions are normal is in no immediate danger.

The cornea is best examined with a lens, because lesions so minute that they cannot be otherwise observed are thus easily revealed. If no lens is at hand stand close to a window, which the patient faces, and study the images pictured on the cornea while the patient looks in all directions. The least irregularity or dullness is pathological.

Another point which I have never seen in any text book is this: The normal cornea is so absolutely transparent that it is almost impossible actually to see its surface, that is, to definitely locate it. If its surface is easily seen, it is diseased. In examining the pupillary reflex the eye *not* under observation must be shielded from light or its reaction will affect the other. Arrange your light so that it can be changed abruptly, and watch the pupil exactly at the moment of change. One of the best methods is to place your light behind the patient, whose eyes are therefore in the shadow and then use a head mirror to suddenly flash the light onto the pupil. The reaction is instantaneous, and the pupil oscillates a few times, much like the hair-spring of a watch, before settling to rest. Any deviation from such a reaction is pathological.

The deductions that can be drawn from various **pupillary reflexes** would almost fill a book; but the limits of this paper will be met by mentioning just a few. A small and sluggish, or a fixed, pupil usually means iritis. It may be due to old adhesions, corneal irritation or drugs. A moderately dilated and nonresponsive pupil may be caused by drugs, serous iritis, paralysis or glaucoma. If glaucoma is suspected, test the corneal reflex by touching it with any suitable object, being *very sure* you do not touch the edge of the lids or the lashes; should the cornea be anesthetic a diagnosis of glaucoma is established. A perfect pupillary reflex may exist in a blind eye, while an eye having perfect vision may show none.

Finally, in all cases, whether acute or chronic or traumatic, compare the eyes in every detail; for close comparison is the basis of correct ophthalmic diagnosis.

DISCUSSION.

R. S. COPELAND: Dr. Baldwin deserves our thanks for this practical, sensible, and understandable paper. He has called attention to a number of important things, and not the least of these is that some ophthalmic problems should be solved by the general practitioner.

I remember the discussion, years ago, of a similar paper at the meeting of the American Institute of Homœopathy. One of our eminent teachers of internal medicine said at that time: "The right of the question is not all on the side of the specialist, nor is the wrong wholly upon the side of the general practitioner." While we may all profit by the advice given in the paper, the subject is not exhausted by any means. In fact, the title of the paper might properly be changed to this: "The Importance of the Early Recognition of Some Common Ground for the Mutual Protection of the Specialist and the General Practitioner." It is undoubtedly true that some of us in the special field retain in our care patients who would be better off by far if they were handed over to the well informed general practitioner. Indeed, the mutuality of interest between the specialist and the practitioner is doubtless best expressed by the old admonition that we must hang together or hang separately.

I am sure Dr. Baldwin did not intend leaving the impression that nystagmus is invariably optical in origin. As a matter of fact, it is now believed that so-called rhythmic nystagmus almost always originates in the internal ear. The essayist has well said that "this condition, developing in adults, is evidence of organic disease." It certainly is, and should be given instant attention.

Dr. Baldwin has condensed in one brief paper practically all the information necessary to avoid serious mistakes in dealing with ophthalmic problems. Distributed, as a tract, and actually read by the

profession this essay would save sight to multitudes otherwise doomed to certain blindness.

J. WILFORD ALLEN: When I saw the title of this paper the thought occurred to me that practically every eye case is a problem to the general practitioner. If any department of medicine deserves elevation into a decided specialty it is that of diseases of the eye. So strongly do I feel on this subject that I would like every student of our college to take a course upon the eye before he began general practice. Many eyes are badly injured, or the sight permanently lost, by inability of the general practitioner to diagnose the case; so I would say, when the eye case presents the least problem, don't guess—send it to a specialist. Take glaucoma, one of the most important and dreaded of eye diseases. How many eyes have been lost, because the general practitioner—confronted with a case showing pain in the eye, violent headache, nausea, vomiting, general depression, slight fever—has treated it as a bilious attack; then before the true state of affairs is recognized it is too late.

Again, take iritis, which needs early diagnosis and early treatment in order that severe damage be prevented. How many of these cases have been treated for conjunctivitis, until adhesions have formed and much harm done?

The text books are very sure in their picture of diagnosis, but we all know that few diseases follow text book descriptions in every case. All the text books tell us that iritis always has pain in the forehead and temple; yet here comes a specialist in ophthalmology, who tells us that many cases of iritis in his practice have presented just one peculiarity—namely, the *absence of pain*. He says, and rightly, too, "forget the text books and remember that iritis, and even glaucoma, is sometimes painless." The main point in the problem of diagnosis is to remember that in glaucoma the tension is always increased, in acute conjunctivitis it is normal, and in iritis is usually normal, but sometimes increased. Remember, as Dr. Baldwin says, "Severe pain in the eye is positive evidence of something serious."

The problem of vertigo frequently confronts the physician. Don't forget that a majority of such cases are suffering from some aural disease or are wearing badly fitted lenses, or are in need of glasses. The problem of removing foreign bodies from the eye, without damaging it or causing the patient suffering, and of doing the work quickly, frequently confronts us. Don't do this work in a hurry. Remember that a little cocain will deaden sensation. Have a good light, daylight, I believe, to be preferable, use the right kind of a spud—not an ordinary probe with cotton on the end, or any old scalpel—and the job is done quickly, safely, and pleasantly. Always give the patient some ferrum phos. (low) and there will be no resulting inflammation.

The problem of the cause of headache, is a daily question to us all. May I remind you that ocular headache, *as a rule*, is either frontal or

occipital. Occasionally it affects the parietal region, but never the vertex. Pain in the head from eyestrain is nearly always relieved by a night's rest, the patient being free from pain on arising.

These are some of the thoughts suggested by the title of this paper. I wish to repeat: "When in doubt about any eye case, don't guess or wait, but consult a specialist. Remember that an eye that once loses its sight can never have it restored."

Syphilis in the Innocent.—Bulkley tabulates from a number of observers 7,123 cases of chancre, of which 6,770 were genital or perigenital, and 353 were extragenital. Of the extragenital, 7 were on the eyelids. The percentage of extragenital lesions according to these figures is almost 5, but inasmuch as these statistics were taken mostly from venereal clinics, and do not include great numbers of innocent inoculations happening in foundling asylums and special clinics, Bulkley thinks that the extragenital lesions would possibly form more than 10 per cent. of the whole. He gives an interesting "*Table of Localization of Extragenital Chancres*," made from the reports from most all civilized countries. Of 9,058 extragenital lesions thus classified, 372 or over 4 per cent. were of the eyelids and conjunctiva. These structures were the fifth in point of frequency affected.

The modes of infection are, of course, as various as the possibilities for placing the spirochæta in contact with the eye. Bulkley mentions from his series a few, now well known and often referred to. Several cases were in physicians and midwives who conveyed the poison to the eye by means of the fingers; in two instances, physicians received the infection from patients coughing in the face. In a considerable number, the chancre was given in an attempt to remove foreign bodies from the eye with the tongue of a syphilitic.

That syphilis insontium is not many times more prevalent than it is, is probably due to the fact which I learned from Dr. Uhle that the spirochæta (treponema) lives under favorable circumstances but a few hours (perhaps 4 or 5), and while it is marvelous what can be accomplished in such a short lifetime, fancy the possible results were the spirochæta as viable as the tubercle bacillus.—W. T. Shoemaker, *Ann. of Ophth.*, July, 1911.

SOCIETIES.

AMERICAN INSTITUTE OF HOMŒOPATHY.

Office of the Secretary.

A clerical error in the announcements of the officers and committees of the American Institute of Homœopathy places Dr. J. P. Rand, Worcester, Mass., on the Board of Censors. Dr. Willard A. Paul, Boston, Mass., was elected to the board, for the term of four years beginning September 26, 1911.

The Board of Trustees of the American Institute of Homœopathy held its stated meeting at Hotel Schenley, Pittsburgh, Pa., December 2, 1911. Important matters with reference to the interests of homœopathy were considered, also the arrangements for the meeting of 1912, which will be held in that city, June 17-22, 1912. Dr. J. H. McClelland, Pittsburgh, is chairman of the local Committee of Arrangements.

The meeting of the Institute will be held in Memorial Hall—all under one roof. The Hotel Schenley, just across the street, will be headquarters. Here will be served each day for seventy-five cents a table d'hôte luncheon, which is at the service of all members and visitors in attendance at the meeting.

AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY.

Abstracts of some of the papers read at Indianapolis, September, 1911:

On the Principles Underlying the Relief for Glaucoma.

MARTIN H. FISCHER, Cincinnati, Ohio.
(By Invitation.)

Abstract: Pathologically considered, glaucoma is an edema of the eyeball and all the clinical signs and symptoms of this condition are referable to this. The amount of water that tissues hold is determined by the colloids of the tissues and the state in which these colloids find themselves. Edema is a condition in which the power of the tissue colloids to take up water, has been abnormally heightened; such an increased hydration of the tissue colloids may be brought about in various ways, one of the most important of which is through the introduction of acid into the tissues. The relief of glaucoma depends upon a reduction of this abnormally great hydration of the ocular colloids. The

use of subconjunctival injections of sodium citrate. Importance of systematic treatment in glaucoma. The problem of opacities in the clear media of the eye.

Tumors of the Hypophysis and Their Relation to Acromegaly and Fröhlich's Syndrome.

DR. DEAN D. LEWIS, Chicago, Ill.
(By Invitation.)

Abstract: It has been established that two definite types of growth changes are associated with diseases of the hypophysis. The confusion regarding the relation of lesions of the hypophysis to acromegaly was largely due to the misinterpretation of the character of the tumors of the gland in cases of acromegaly.

These were usually regarded as sarcomas which would cause a destruction of the gland. These so-called sarcomas were undoubtedly in most instances hyperplasias of the anterior lobe, indicating an excessive secretion of the gland. The hyperpituitary theory of acromegaly, originally based upon pathological findings, has been proven by the results which follow partial hypophysectomy.

The other growth change is characterized by adiposity and sexual infantilism. It was first described by Fröhlich and is often called Fröhlich's syndrome. Some of the phenomena observed in this syndrome occasionally occur in acromegaly. The lesions most frequently associated with this syndrome occur about the posterior lobe. They may be associated with peculiar tumors developing from undifferentiated islands of mouth epithelium which remain after involution of the craniopharyngeal duct. The same syndrome may occur in other brain lesions, especially internal hydrocephalos.

Prognosis and Treatment of Tuberculosis of the Larynx.

DR. WOLFF FREUDENTHAL, New York.

Abstract: Pessimistic views formerly held as to a permanent cure of tuberculous lesions of the larynx are gradually making room for more hopeful opinions; results obtained all over by men of experience justify that optimism.

Treatment should be directed towards removing (1) cough, (2) dysphagia, and (3) dyspnea. Importance of general treatment of upper air passages, especially in sanatoria. Methods now in vogue for stopping pain in deglutition. New method used by the author: fulguration. Surgical intervention.

The Treatment of Cicatricial Laryngeal Stenosis.

DR. EMIL MAYER, New York.

Abstract: No other organ in the body shows such tolerance to the forcible introduction of instruments and divulsive methods as does the larynx and we may continue the treatment for months and years and

expect beneficial results to be attained ultimately. The method of Sarnier was briefly described and its disadvantages pointed out.

There is probably a great future in the results to be obtained by the frequent introduction of the bronchoscopic tubes of Jackson and Bruening. To John Rogers, of New York, is due the highest praise for his valuable addition to the O'Dwyer tube, making it possible to hold the tube without the slightest danger of involuntary extubation.

From a large and extended experience the writer believes that the best results in the treatment of cicatricial stenosis of the larynx are obtained by the prolonged wearing of an intubation tube of proper size after the parts have become sufficiently distended to allow the easy introduction and retention of the tube.

Result in 100 Cases of Sinus Thrombosis.

DR. F. PHINZY CALHOUN, Atlanta, Ga.

Abstract: A knowledge of the nature of the infection is of no practical value, as one operates for symptoms or surgical findings only. Ordinarily there are two types of infective sinus thrombosis: the one with constitutional symptoms, and the other without symptoms, in which a bad sinus is discovered by operation.

Optic atrophy occurs in 35 per cent. of the cases, and is a grave symptom. Blood counts are of doubtful value.

To a certain extent, the technique of approaching the sinus and excising the jugular vein are described in the paper. Forceps are preferable to the curette or chisel in uncovering the sinus. The author prefers closing the neck wound with a drain. A ligation or excision of the jugular, and curettement of the sinus at the same time, is better than a curettement and subsequent ligation. Septic pneumonia is nearly always a fatal complication. Mortality in the series is 41 per cent.

The Use of Radium in Ophthalmology.

DR. G. STERLING RYERSON, Toronto, Canada.

Abstract: Physiologically radium produced a sensation of light when applied to the skull, which is probably due to fluorescence of the refractive media. Two cases of sarcoma of lids and one of rodent ulcer successfully treated. Radium has been used with success in the treatment of trachoma, spring catarrh, hypopion ulcer, dendritic, vascular, Moorens, and herpetic ulcers of the cornea. Suggested that opacities of the lens and vitreous might be dealt with by radium therapy.

Concerning Uveitis (Descemetitis in Particular) and Its Probable Relation to Latent Nasal Obstructions.

DR. WENDELL REBER, Philadelphia, Pa.

Abstract: For many years the etiology of low grade (almost non-inflammatory) forms of descemetitis has been involved in much ob-

scurity. They have commonly proven very rebellious to treatment. Latent nasal obstruction (not necessarily closed empyema) has been mentioned from time to time as a possible etiologic factor, but this belief has not been generally accepted.

Report of a series of cases in which conjoint treatment of the nasal mucosa and the ocular condition has produced relief and cure much more promptly than by the usually accepted measures.

Submucous Septal Operation—160 Cases By Author's Special Instruments.

DR. MYRON METZENBAUM, Cleveland, O.

Abstract: 1. The mucous membrane is separated in the usual way over both sides of the entire deflected area, held apart by retractors, and the anterior perpendicular incision made thru the cartilage.

2. The author's septal chisel with the groove facing downwards is introduced along the upper deflected border of the septum, and forced or driven backwards thru the cartilage and bone until it passes beyond the deflection, then it is withdrawn.

3. The chisel is now introduced with the groove facing upwards, engaging the septum below the lowermost deflected portion or basal ridge, and is driven backwards beyond the deflection and then withdrawn. This leaves only the posterior perpendicular border attached.

4. An artery forceps grasps the partially separated portion of the septum as far back as the desired line of posterior cleavage, and by a short snap fractures the posterior border and brings out the separated portion in one entire piece. The mucous membrane is then grafted.

5. The chisel is three-sixteenths of an inch in width, half rounded, with two blunt projecting points and a longitudinal slit in which the severing cartilage or bone can ride.

6. It embodies the principles of several accepted spetal instruments. It is simple, small and strong. With it any portion of the deflected cartilaginous or bony septum can be severed accurately in the horizontal plane without contusion to the adjacent tissues. The average operating time is fifteen minutes.

The Histology and the Nasal Treatment of Acute and Subacute Suppuration of the Sinuses.

DR. C. M. MILLER, Richmond, Va.

Abstract: Pathologic conditions of the mucous membrane of the nasal accessory sinuses differ but slightly from the pathology of mucous membrane inflammation in other locations. Medical treatment often suffices. This has of late years, however, been much neglected for the surgical side. It is the opinion of the writer that many of our cases should be treated more conservatively.

HOMŒOPATHIC MATERIA MEDICA AND THERAPEUTICS.

HEPAR SULPHUR IN ACUTE COUGH.

JOHN B. GARRISON, M. D., NEW YORK.

October 16, 1911. The case I am about to report is a single lady of thirty-five years, school teacher, whom I have known and cared for in a professional way for twenty years. On this date she came for relief from a cold which she had taken a short time before and which was now interfering with her regular work on account of the hoarseness. A careful examination at the time disclosed a general congestion of the pharynx and larynx. The faucial tonsils were normal as to size. The lingual tonsils were considerably hypertrophied. She complained of a rawness along the trachea, and the cough was very annoying. She had considerable indigestion and much flatulence, worse toward evening. *Lycopodium* 30 improved all somewhat.

On October 26th, the cough still remaining, I removed the lingual glands, after which the cough subsided. On October 31st she suddenly developed a complete aphonia, without any pain, but the attempt to use her voice in school had the effect of causing the throat to feel very tired, and an extreme rawness in the larynx developed in the course of a day. *Carbo vegetabilis* 30 seemed to relieve this condition, and on November 4th she reported no rawness, voice clear in the morning, but it grew hoarse by use. Very little cough. *Phosphorus* 30 was given, a dose every three hours, and in a few days she considered herself quite well.

She made a trip to Philadelphia to spend Thanksgiving and took cold, so that on December 6th she came to the office complaining of a constant cough, aggravated by talking and croupy in sound. Profuse watery discharge from the nose. Examination of the nose disclosed a very tender middle turbinal on the right side, being in contact with the septum. *Spongia* was given but it did no good, and on the 7th the cough was very convulsive, and it seemed to her that her head would split when she had a paroxysm. The pharynx and larynx were sore and I gave her *bryonia* 6th but without results. Then I did some repertory work to be sure of my remedy. The general statements from which I made my analysis were as follows:

Profuse perspiration from every slight exertion and especially after every cough paroxysm. Cough worse by eating anything cold; cough aggravated from lying down.

"Perspiration from slight exertion" has agar., ars., ars. iod., brom.,

bry., calc. carb., sulph., chel., chin., chin. ars., cist., cocc., eupi., ferr., ferr. iod., ferr. m., gels., graph., hepar, iod., kali s., lyc., merc., nat. c., nat. m., nat. p., nat. s., nit. ac., phos., psor., rhus t., sep., sil., suf. (Kent, p. 1231.)

"Perspiration after coughing:" By elimination we have left the remedies, ars., calc., ferr., hepar, merc., phos., rhus and sepia. (Ibid.)

"Cough aggravated by taking cold food." This leaves but one remedy which has all three of these symptoms peculiar to the patient, and that is *hepar sulph.* (Ibid, p. 759.)

Hepar sulph. 30 was prepared in water and a dose taken every two hours. Improvement set in within a few hours, the perspiration being the first to leave. The cough speedily ameliorated, and the third day after commencing hepar she reported that every unpleasant symptom had disappeared and she declared that she was perfectly well.

Dec. 14, 1911.

COLCHICUM.

B. H. A. Proving. *North American Journal of Homœopathy*, Dec., 1911, p. 859.)

Eye Symptoms.—Pupils unequal, right larger than left. Pupils unequal, the left the larger. Pupils vary in size. Variations in visual acuity. Dimness of vision after reading a few minutes. Spots, which did not move, before the eyes. Streak like a hair before the right eye, passing obliquely downward on moving the eye. Slight variations in muscle balance. Slight suffusion of right conjunctiva. Slight congestion to inner side of right cornea.

Ear.—Occasional itching in ears, relieved by boring with the finger. Sharp shooting pains below right tragus, which passed upward and inward, severe, lasted two or three minutes. Stuffy feeling in left ear, hyperemia of handle of malleus (coincident with laryngeal catarrh). Singing in ear gradually disappeared during proving. Dark solid clot of blood discharged from left ear. Healing of a previous perforation in left ear. Increased power of hearing in left ear: of watch, from contact to 3 inches; of low whisper, from 1 foot to 4 feet; of medium whisper, from 3 feet to 10 feet; of loud whisper, from 8 feet to 20 feet.

Nose and Throat.—Increase of mucus in throat and larynx. Slight dryness of throat, not relieved by drinking water. Feels as if caustic had been applied to throat, taste of caustic, pharyngeal reflex exaggerated. Slight granulation of pharynx improved during the proving (one prover), liability to nasopharyngeal catarrh in one prover was unaffected by the proving.

The Journal of Ophthalmology, Otology and Laryngology

Vol. XVIII

Lancaster, Pa., and New York, February, 1912

No. 2

EDITORIAL.

TRIFLES; DETAILS; TECHNIQUE.

“**T**RIFLES make perfection, but perfection is no trifle,” is a trite adage, and the application of its fundamental idea is no where of greater service than in the pursuit of our chosen vocation, the so-called Science of Medicine; but judging from the present trend of thought, better denominated, Art of Health Retention. In adapting it to our dignified profession, precision is possibly better subserved by substituting details or technique for trifles.

The attention of every practical clinician has been drawn to some certain minor or contributory method of observation, diagnosis or treatment, which has assisted him materially; but which observation may have been overlooked by many others of us. Such experiences not being considered of sufficient importance to write a paper thereon, there is little opportunity of bringing them to the attention of the mass of practitioners.

As the knowledge of these would assist your confreres, and be appreciated by many, as well as probably materially benefit the patients under our care; the editors would offer as a channel thru which to present such personal experience to the profession, to allot a few pages in each issue for their publication, under some such title as “The Journal Clinic,” inasmuch as it is almost a fac simile of collecting practical pointers at another’s clinic.

To this end may we ask and urge every one who reads this request to jot down a clearly descriptive paragraph on each of two or three practical procedures which he thinks are not generally employed. Will you kindly do this immediately, as the absorbing interest which many take in their work is very conducive of forgetfulness of such

courtesies or obligations to his confrerers as literary contributions, altho they may demand but as meagre an amount of time as this.

The importance of such class of information is indicated by as an accredited an authority as Dr. Ballinger, by giving space in such a comprehensive book as his, to "cold feet," "effect of clothing," and his minute instructions for "negative air pressure," etc., etc. Again, Dr. Abraham Jacobi in a lecture to teachers upon Prophylactic Measures, laid no small stress on teaching the children to clean or blow their nose.

In order to start the ball rolling the writer will cite the following:

Rhinologists, we think, not infrequently are apt to overlook the instructions to nasal breathing caused by the malposition of the soft tissues forming the nostrils, *e. g.*, dislocation or twisting of the internal wing of the cartilage of the ala, relaxed or collapse of the ala, fracture and dislocation of the anterior nasal spine, etc.; because of our habit of hastily introducing the nasal speculum before observing the natural contour of these external parts; in so doing we, of course, press these soft parts aside thereby temporarily removing the obstruction, in reality masking the actual condition and deceiving ourselves.

NOTE.—With regret we are compelled to acknowledge the interruption of the regularity of the appearance in the January issue of the frontispiece of the president of the O., O. and L. Society, due to the oversight of the printer. An old adage there is, "Accidents will happen even in the best regulated of families," and why may not omissions in business.

Particularly do we wish to publicly beg the pardon of our enterprising president, Dr. Suffa, especially as he kindly supplied the electrotype, another evidence of his forethought, thereby relieving the publisher of the responsibility of obtaining an electrotype satisfactory to the original—not always an easy task.

CORRECTION.—The name of the author of "Typical and Atypical Mastoiditis" occurring on pages 7, 9 and 11 of the January issue should be George W. McDowell, M. D., O. et A. Chir., New York City.

THE PHYSIOLOGY OF THE MEMBRANOUS LABYRINTH.

BY WILLIAM M. MUNCY, M. D., O. ET A. CHIR.,

Providence, R. I.

THE time allotted for this paper will hardly allow a hasty review of the physiology of the labyrinth, so that a thorough consideration of the history, biological and histological gleanings, and theories of functions as planned in the abstract, are out of the question. Therefore I shall touch upon only that part which will bring us to some logical conclusion without attempting to do justice to the mass of material on this subject.

Phylogenetically speaking, there existed in the origin of our vertebrate ancestors, living forms with ample superficial auditory vesicles: *i. e.*, auditory organs composed of a single endolymphatic sac; the utricle with its macula acustica utriculi.

Then there supposedly developed a constriction at the sides, giving the appearance of two connecting cavities: the utricle and saccule each containing a macula acustica.

This brings us up to living organisms, as in Myxine, where are found the addition of one semi-circular canal, with two ampullæ and two crista acustica. Or the semi-circular canal may be considered as two canals united at the center. Fishes and Dipnoans present not only a utricle with its semi-circular canals and a saccule, but also a small recess from the latter, called the Lagena, with its small macula acustica. It is from this that there develops the morphological bud, which gradually unfolds into full bloom, as the membranous cochlea of man.

It is proper at this stage, when the saccule, utricle and semi-circular canals have reached the height of their development, at the same time having the cochlea represented to so slight a degree as the lagena, to compare the physiological functions of the various parts. Especially as the lagena, consisting of but a small sensory patch with overlying otolith, seems to have a function, similar to that of the saccule, of which it is but an accessory pocket.

Of the numerous experiments performed by many in regard to these functions in fishes, none are as thorough or conclusive as those of

G. H. Parker, of Harvard, whose papers I shall quote in part. "Dogfish from which the otoliths had been removed from each saccule, by an opening made through the mouth, are found to be strong and vigorous in their swimming, and are absolutely indistinguishable from normal individuals in their equilibrium. In response to a pendulum apparatus so arranged that a definite degree of sound could be measured by having it strike the wooden side of the tank, the fish responded to sounds, the same as those in which the eighth nerves had been severed. In other words, he had, by removal of the otolith, produced deafness equal to the destruction of the entire eighth nerve. However, where both eighth nerves had been cut, there is a profound disturbance in equilibrium, and they usually swim in irregular spirals, resting on the bottom of the tank, in any position: dorsal or ventral side up. Yet some smooth dogfish will acquire the ability to swim slowly in normal equilibrium, partly due to the eyes and partly to the sense of touch, but when made to swim with ordinary rapidity lose their equilibrium.

"Another interesting fact was noted in that dogfish, in which one of the eighth nerves had been cut, were slightly weaker after the operation, and in those with both eighth nerves cut, this weakness was invariably intensified. This was very noticeable in handling the fish, a phenomenon not apparent when the second nerves were cut. Therefore observation in smooth dogfish show that the ears are concerned with equilibrium and muscular tonus, and that the otoliths are not essential to equilibrium, but are in some way concerned with hearing."

Parker's experiments upon the squeteague (*Cynoscion regalis*) are still more ingenious and conclusive. Here the main feature anatomically lies in the fact that the utricle with its semi-circular canals are separate from the saccule; *i. e.*, a double auditory organ, which allows the destruction of one without impairing the function of the other.

Squeteague, with eyes covered by blinders, swim with normal equilibrium. A number of these were taken, their utricle and semi-circular canals destroyed; when it was found that the lost equilibrium thus produced was soon recovered: the fish then swam the same as the normal ones. But when their eyes were covered, they swam with great irregularity, and had all the appearance of having lost their equilibrium completely. However, as to sound tests, they responded the same as did normal individuals. They also showed marked muscular weakness, manifested in handling them, which could not be accounted for by the shock of the operation.

Another group were taken and the large otolith or sogitta pinned down against the farther non-nervous side of the saccule, so that to a large extent the function of that organ was destroyed. The previous tests showed a retained normal equilibrium and, notwithstanding the severity of the operation, no diminution of muscular strength. When the sound tests were used there was found only a slight response.

These experiments upon fishes show that "the utricle and semi-circular canals have to do with equilibrium, and as such do not stand secondary to the eye; but are certainly of prime importance as sense organs in which impulses originate for the reflexes of equilibrium." It is also an organ of muscle tonus, as also held by Ewald, as early as 1892; "that the vigor of an animal's movements is largely dependent upon the integrity of the internal ear." "The utricle could act as an organ of hearing, but not at all probable. On the other hand, the saccule, which has nothing to do with equilibrium or muscle tonus, is the chief organ of hearing; a function in which the sagitta or otolith plays an essential part."

Such are the conclusions of Parker, which are applicable to higher animal life, where the changes of anatomical forms are only such as demanded by the media in which they exist plus the extent of tone perception intended.

Loudenbach (1899) has shown that the removal of otoliths from the ears of *Souridens* and frogs does not affect their equilibrium.

Smith (1905) states that in all *Sciænoid* fishes, which drum as the *Spueteague* does, the sagitta are very large, while in *Menticirrhus*, which do not drum, the otoliths are relatively small.

I know many experiments have been performed from which conclusions have been drawn that the otoliths of the saccule were the essential factors in equilibrium, but in all of these the utricular organ and semi-circular canals were impaired.

Our conclusions thus far as to the functions of the semi-circular canals are fully corroborated by the tests made by Drs. Robert Barany, Heinrich Neumann and others in regard to aural nystagmus. It is differentiated from other forms of nystagmus, in that it is a rhythmic oscillation of the eyeball; having a slow movement in one direction, followed by a sudden motion in the opposite. It is the direction of this quick movement, or "Enstellung" of the Germans, that the character of the nystagmus is termed, right, left, horizontal or rotary.

If a subject seated on a stool is turned to the right there will be a

slow movement of the eyes to the left (in a direction opposite to the turning) followed by a rapid movement to the right. Therefore a nystagmus in the direction of turning. However, on stopping the turning of the subject there will be seen a nystagmus in the opposite direction or left nystagmus. This feature is of varying intensity, depending upon the direction in which the subject looks. If he glances forcefully in the direction of the nystagmus to the left, as in the above case, there will be noticed a marked improvement, in comparison to that apparent when looking in the way of the slow component.

Holding the head on the shoulders, forward or backward, produces nystagmus in a direction horizontal to the vertical axis of the body and in a direction when stopped opposite to the turning. Thus rotational nystagmus shows that movements of the body cause a flow of endolymph within the semi-circular canals in a direction opposite to that of the turning; also that the canals whose plane lies in that of the force applied receive the greatest stimuli.

The ampullæ of opposite paired semi-circular canal is also stimulated, but to a less degree. This is shown when disease has impaired or destroyed the nerve of the maculla, in that the normally lesser stimulated ampulla becomes the greater; producing a nystagmus in a direction opposite to the test in health.

Caloric nystagmus gives the following reactions: When the right ear is syringed with hot water (105 degrees) there is observed a nystagmus to the right. Syringing the same ear with cold water below 50 degrees produces a nystagmus in the opposite direction, or to the left; while syringing the ear with hot water at the body temperature, no nystagmus is noticed. It is worthy to note that in disease where a temperature, for example, of 103 or 4 degrees exists, there is a negative reaction to water of a temperature of 105 degrees.

These reactions are due to the current of fluid in the semi-circular canals produced by the expansion or contraction of the endolymph, produced by the varying temperatures of the fluids in the external auditory canal.

Pressure may produce nystagmus, best shown when a fistula of the horizontal canal exists. By making air pressure against the wall a current is generated toward the ampulla and nystagmus of the same side produced. On the other hand, exhaustion of air produces a reaction in the opposite direction.

Galvanic nystagmus when the positive pole is placed on the right

tragus produces a reaction toward the unstimulated side. This will only be noticed when the subject looks in the direction of the quick component. Now if the cathode is applied to the tragus a nystagmus is apparent toward the stimulated side.

Thus the anode test is synonymous with the cold water syringing and the cathode with the hot.

In conjunction with nystagmus, if the stimuli is sufficient vertigo and even nausea and vomiting may be produced. Barany states that vertigo without nystagmus is not due to irritation of the vestibular apparatus.

When during nystagmus a subject is placed in Romberg's position vertigo is in a direction opposite to the rapid component.

Prof. James, of Harvard, 1887, found only one subject among 200 normal individuals that was not affected with vertigo after the rotation test; whereas it was absent in 186 deaf mutes out of 517 tested. These findings were also corroborated by Breuer. Many deaf mutes under water "suffer an indescribable confusion and anxiety," which was relieved only when the head came to the surface.

Thus, according to Nagel, it is undoubtedly one of the functions of the labyrinth to maintain the balance of the body in its various positions of rest as well as during locomotion; *i. e.*, static as well as dynamic function. J. Morrison Roy applies the former function to the semi-circular canals and the latter to the vestibule.

I hold that the macula acustica of the utricle and perhaps the sacculus add certain reflexes which account for our proper orientation or recognition of our adjustment in space. This somatic reaction is due to many cosmic influences; yet as shown in many deaf mutes in tests of vertigo that this particular function has a prominent seat in the membranous labyrinth; whether the macula acustica of the utricle due to its otoliths possess also a slight acustic property to the extent of conveying to the brain the impression of the source from which sounds arise is to me a question.

Or is this orientation of sound confined to the impressions from the sacculus, the biological sound perception apparatus?

In order to better understand the function of the sacculus and cochlea let us refer back to the fishes and trace their development. The sacculus with its large otolith in fishes is the fundamental acustic organ. It easily fills this role, as it lies just below the skull; thus being easily accessible to the wave sounds, which are of so much greater intensity

than aerial sound-waves. Of course the operculum when present, gill slits, webbers organ and the swim bladder play a part in the auditory function of fishes; nevertheless the saccule here reaches its greatest independent importance. As Wiedersheim aptly says: "The higher we pass in the vertebrate series the greater share does the mesoblast take in the formation of the auditory organ, and it gradually sinks further and further inwards from the surface, so that a new method of conducting the sound waves becomes necessary."

Passing to Amphibia, we find these changes well enough marked to show in what direction they are tending. The lagena becomes more highly developed in conjunction with which it is further constricted from the saccule. Due to changes in media and demands of a more sensitive conduction apparatus there develops a middle ear with fenestria ovalis, stapedial plate, consisting of a rod-like cartilage or bone: tympanic cavity membrane and eustachian tube.

In reptiles, as expected, the chief modifications are confined to the lagena. It is here well developed with its sensory organ divided into two groups, one the true maculla lagena with its otolith later to disappear as the macula neglecta did in the fishes, while the other, the lagena cochlea of Ayers, to develop into the membrana cochlearis. This cochlea portion varies from a short canal low in the series, as in Chelonians, to a canal considerably larger and slightly coiled on itself as in crocodiles. In alligators it is distinctly marked off from the saccule and consists of a depressed tube of angular outline, relatively large size and curved in two directions; *i. e.*, bent upon itself. This curved tube in Saurians becomes a spiral twisting.

The basilar membrane in these types consists of three layers acting nowise as a vibratory membrane, but as a support for two organs of unequal size. One a thickened part of the papilla acustica basiloris, called the Sauropsid ridge. The other, smaller and to the outer side, the incipient organ of corti. The hair cells are more widely separated than in mammals, having above them a form of membrana tectoria of loose texture without otoliths, resembling the cupula terminals of the ampullæ organs. It is this inner or Sauropsid ridge that plays the main part in the cochlea of reptiles and Saurians which does not exist in mammals, except during embryonic development.

In birds the changes are generally more pronounced than in reptiles. though not so much so as would be expected, especially if comparisons are made with the higher reptiles, as the alligator.

The Avian Cochlea, as in the mocking-bird (*Mimus Polyglottus*), hangs down from the floor of the saccule, from which it has become more independent. The lagena is also more markedly constricted from the basilar portion, being conspicuous by the presence of a large horseshoe-shaped otolith. "The papilla basilaris as a sense organ is here distinctly separated from the macula acustica lagenæ, from which it originated by division. Their nerve supply show even more distinctly the separation of the two structures."

There is also well-marked scala tympani and vestibuli present. In mammals the lagena has disappeared and the otoliths are always small and confined to the macula acustica utriculi and saculi. The only connection the comparatively small saccule has with the neighboring parts is by means of the canalis utriculi saccularis with the utricle; and the canalis reuniens of Henson with the cochlea. The cochlea, many times larger than the saccule or utricle, has coiled upon itself two and three-fourths times; or, according to Wiedersheim, three. All that remains of the large inner Sauropsid organ of the lower types is the row of lining cells of the limbus spiralis internus.

The small outer ridge has further developed and added a new histological feature foreign to all others in the form of the rods of Corti. They rise like ridge poles of a tent, holding the hair cells firmly above the membrana basilaris, so that their surface is parallel to the membrana tectoria. The rods also divide the cells into two uneven parts; the single inner row of hair cells and the outer hair cells. The organ of Corti is, therefore, situated upon the membrana basilaris at its inner side with the hair cells projecting into the endolymph and toward the membrana Reissner, from which it is separated by the almost structureless membrana tectoria. Below the membrana basilaris lies the scala tympani and above the membrana Reissner lies the scala vestibuli.

As the various theories of tone perception depend upon the character and position of the membrana tectoria it is advantageous to consider its origin.

This exists in the Sauropsid organ which in reptilia Saureans and birds consists of the greater part of the papilla acustica basilaris. As before stated, there lies to the outer side of that part of the papilla which is the forebearer of the organ of Corti. A somewhat similar condition exists in man during embryonic development, with the exception that the inner papilla fulfills its function and begins to dis-

tegrate before the outer cells of the outer papilla have become differentiated as hair cells.

Rickenbacher in pig embryo, 3 cm., noticed a decided thickening of fibrous character which at 12 cm. has increased until equal comparatively to the saurian organ of reptiles in size. Soon after this a smaller epithelial thickening is seen at the outer side which at 14 cm. shows evidence of the origin of the organ of corti. During this period there has developed, above the larger inner ridge, a tectorial membrane. The fibers of this extend at first upward from the parent cells, later take an oblique direction which finally when freed from the underlying cells are horizontal. The tectorial membrane is considerably developed before the hair cells are seen and only by the stage of retrogression of the greater epithelial thickening are the hair cells brought under the outer part of this membrane. First there is a cessation of growth of the cells, followed by a disintegration and a liquefaction of their remains. This leaves in the adult cochlea the greater thickening represented by an indifferent epithelium lining the sulcus spiralis, extending from the inner supporting cells of corties organ to the edge of the labium vestibulare.

During this process the number of rows of cells have greatly diminished, which without doubt has much to do with bringing the hair cells under the membrane. The stripe of Henson, always seen on the under surface near the outer border, is the last point of attachment of the membrana tectoria to the outer side of its papilla. Or they may in some way be related to the plate formed by the phalanges of the rods of corti, as the stripe always occupies a position above them. The tectorial membrane when fully developed is attached only at its inner side upon the labium vestibulare, having its outer part floating free in the endolymph. Attached to its outer lower surface just beyond Henson's stripe is the accessory tectorial membrane.

Irving Hardesty found in his dissections upon unstained specimens that the readiness with which it bends when touched or even agitated is beyond description. That it possessed slight elastic properties, especially in its transverse diameter, and that its quality of adhesiveness was phenomenal. Its specific gravity was slightly greater than the fluid in which it lies. The membrane was composed of a glutinous or collagenous semi-solid substance, with fine fibers running through it in an obliquely transverse direction. Its matrix is neither mucus nor elastic as to stains. Its upper surface is convex throughout, being

greater over the organ of corti. Its under surface is concave with a flattened portion above the hair cells. It gradually increases in size as it extends upward from the basilar coil.

It seems probable not only on account of its position and physical properties, but also on account of its evolutionary formation, that the tectorial membrane plays an important part in the transmission of tones. Sounds enter by way of the fenestra ovalis into the scala vestibuli; when coming in contact with the membrana Reissner (a thin delicate membrane stretched between two fluids of the same specific gravity) it passes without losing any of its properties into the ductus cochleæ. Here it comes in contact with the membrana tectoria and the hair cells of corti organ.

It is here that our speculations begin as to how the sound is imparted to the hair cells.

Hasse was the first to note the plausibility of such an arrangement, stating that sound waves entering by way of the oval window would come directly in contact with the membrane. Siebenmann agreeing with him adds the suggestion that as the membrane varies in a gradual systematic way, both in size and form, as it extends upward should explain the differentiation of tone in its several parts.

Ewald advanced the obsolete theory that the basilar membrane possesses a vibratory function, thus bringing the hair cells by its vibration in contact with the tectorial membrane.

Shambaugh, 1907 and '10, holds that the hair cells are incapable of receiving stimulation directly from the endolymph, due to the fact that the membrana tectoria covers the organ of corti, being attached to the supporting cells on each side.

Hardesty, 1908, in his dissections, has shown this attachment does not exist, but that the hair cells project freely into the endolymph.

Kuile advanced the theory that the hair cells do not rub against the membrane (Ewald), but strike its under surface vertically.

The resonance theory, the telephone, or a combination of both in part, are advanced to account for the perception and transmission of sound by the hair cells. The first assumes that the cochlea has the power of analysis of sound; *i. e.*, that the perception of tone is differentiated by various parts of the cochlea. In other words, that there are different parts set in vibration by tones of different pitch. The telephone theory assumes that the transformed sound, as imparted to the endolymph, affects the structure of the cochlea as a whole. That

the cochlea does not differentiate the closely approximated beats of varying intensity, but rather transmits the general impression directly to the brain where the function of tone analysis is presumed to be situated.

Meyer furnishes an example of the combined, when he says that the pitch will depend upon the frequency of the number of stimuli per second, while the intensity depends upon the total number of nerve endings irritated. This allows a certain amount of analysis in the cochlea. Irving Hardesty expresses a conservative point of view when he sums up the question; in that the agitation of the hair cells is brought about through the activity or actual movement of the tectorial membrane, and that the extent, region, amplitude and quality of its vibrations depends upon the force, frequency, amplitude and quality of the vibrations acting upon the membrane.

The tectorial membrane does not seem to me to adequately fill the role of a vibratory mechanism; nor on account of its position free from the hair cells do I think it a direct transmitter of sound. Yet holding a position so constant among all animals in which a macula papilla basilaris exists it is certainly of much importance.

I hope I may be forgiven for adding one more opinion to the many already advanced by stating that the membrane acts as a check or dampening apparatus, thereby cutting off parts of the cochlea from tone perception. That is, with Ayers and W. S. Bryant, I hold that the hair cells receive their stimuli direct from the impulse of sound waves within the endolymph; with Shambaugh and Hardesty, that these sound waves enter the ductus cochleæ by way of the scala vestibuli through the membrane Reissner.

If the amplitude or intensity of the complex tone wave is great it will force the membrana tectoria cover over the hair cells which, on account of the membrane's position, will prevent the cells from receiving the tone vibrations in the endolymph. However at the point where the amplitude is not sufficient for this the free hair cells receive from the endolymph the tonal wave with its individual peculiar rate of vibration or pitch spread out over a certain group of hair cells.

The timbre depends upon the receptive power of the hair cells, in differentiating the component parts of the complex wave tone, combined with the education of the brain cells which receive the stimuli. This dampening gives the sensation of volume or intensity of music; at the same time allows the delicate perception of tones and overtones.

even when the intensity of the sound is great. If there is no individual rate of vibration or pitch the impression received will be that of the muffling procedure alone, as in case of a noise or toneless sound.

Thus the tectorial membrane in diminishing the intensity of tone wave acts in a way similar to the iris in its regulation of the amount of light that falls upon the retina.

The Estimation of the Visual Efficiency of Injured Workmen. J. J. Evans, *Birmingham Med. Rev.*, Oct., 1910.

The following factors must be considered:

1. The visual acuity for distance and near.
2. The presence or absence of binocular vision.
3. The extent of visual fields and the presence or absence of scotomata.
4. The condition of the ocular muscles—extrinsic and intrinsic.
5. Conditions of work.
6. The general—and especially the nervous—state of the patient.

To circumvent malingerers, Evans cuts up test types and pastes the letters on to a fresh card, arranging them at haphazard, so that the malingerer cannot make up his mind to read down to a certain line. This can be done both with the ordinary types and with the trident E in different positions. The top of E = 6/60 is best omitted. Reversed types, viewed in a mirror, are also of great use. Any great discrepancy between near and far vision should lead us to suspect malingerers.

Industrial vision may be considered normal if vision is not less than 6/12. It is generally held that if it falls below 6/60 the individual cannot earn his living; Evans thinks this standard is too high.

Roughly speaking, he takes the following as a guide as to the vision required in different trades:

(a) For skilled workmen (engineers, fitters, mechanics, jewellers, machinists, etc.) and members of learned professions, 6/8 to 6/12.

(b) For unskilled workmen (laborers, miners, quarrymen, carters, etc.), 6/12 to 6/60.

Objective test for binocular vision; Wetz's prism test is the best; this causes diplopia and the necessary movement to effect fusion can be detected. But a one-eyed man can be an excellent mechanic; binocular vision is not necessary in most trades. It is bad policy for a man to give up his work because he has lost an eye.

Slight diminution of the visual fields causes no reduction in the wage earning capacity. Homonymous hemianopsia is more troublesome, and the reduction in the wage earning capacity may be estimated at as high a figure as 40 per cent. But the nature of the work must be considered. Central scotomata are serious, especially in railway work.

A very valuable contribution to ophthalmic literature and should be carefully studied.—*Abstr., the Ophthalmoscope*, Aug., 1911.

DIAGNOSIS OF LABYRINTHITIS AS EVINCED BY NYSTAGMUS.

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NEWMAN gives as his opinion that suppurative labyrinthitis is present in a much greater proportion of mastoid cases than the 1% formerly given as the estimate.

Purulent infection may enter the labyrinth from tympanic cavity or antrum as sequence of acute or chronic middle ear disease, or infection may come as in cerebro-spinal meningitis from cranium. Much more frequently the route is by way of the middle ear. Here we have to deal with the acute diffuse labyrinthitis due to an extension of an acute purulent otitis media and mastoiditis, or an acute exacerbation of chronic middle ear diseases. Second type, a circumscribed labyrinthitis, one of the sequelæ of chronic otitis media suppurativa. This is characterized by attacks of vertigo and nystagmus, and always by some impairment of hearing.

Labyrinthitis due to trauma either by injury to the head or to traumatism during operation when the stapes is dislocated, or semi-circulars wounded, partakes of the characteristics of circumscribed or diffuse, depending upon the extent of the injury, amount of hæmorrhage, etc.

That type of circumscribed labyrinthitis most interesting in the study of nystagmus is that due to erosion of semi-circular canal with fistula and may remain circumscribed for a long time. Circumscribed labyrinthitis being a slow process, granulation of tissue often walls off infected part, and by formation of connective tissue and gradual ossification the remainder of the labyrinth remains normal and spread of infection to endocranium never occurs. Again, these infected areas may become the foci for dissemination of pus to remainder of labyrinth, and latent labyrinthitis becomes a diffuse one and may extend to endocranium. The gradual slow invasion develops in the vestibule a toleration to irritation and manifest symptoms are often wanting except when elicited by caloric or turning tests. Transient attacks of vertigo are often present with spontaneous nystagmus, more or less severe with intervals of cessation.

Caloric tests show normal reaction at first; if later vestibule loses more of its irritability caloric reactions are weakened.

Tinnitus, marked deafness, loss of bone conduction and loss of upper tone register are often present, showing involvement of cochlea. The recurring attacks of vertigo may be quite marked, lasting from a few minutes to several hours, and often accompanied with severe nausea and vomiting. These attacks may occur without any special cause, while walking, eating or quietly seated. More frequent are slight attacks of vertigo lasting only a few seconds and occasioned by a quick movement of the head, stooping forward or inclining head backward. The nystagmus is rotary and directed toward diseased side. Between attacks patient feels normal and often shows no signs of nystagmus.

Acute destruction of the labyrinth occurs in acute purulent involvement of the labyrinth in hæmorrhage into labyrinth from fracture at base of skull or from arteriosclerosis, and in syphilis and leukæmia. Symptoms come on suddenly—severe vertigo, nausea, vomiting, apparent movement of external objects, great disturbance of equilibrium and inability to walk, and violent horizontal and rotatory nystagmus to sound side. The patient must lie down and on his well side, as in this position his nystagmus is decreased. The severe symptoms usually subside in a few days when nystagmus ceases or is much diminished. The subjective symptoms usually disappear before nystagmus in persons with sound nervous system. Nystagmus only after a few days noticed when patient rises or turns head suddenly. Patient is deaf and if there is destruction of labyrinth remains so. Caloric test negative—Weber's lateralized to well ear. It is necessary to see these patients soon after disease begins, as severe symptoms so soon pass away, leaving only deafness and slight nystagmus—latent labyrinthitis. Then labyrinthine trouble can only be diagnosed by caloric test or turning. Then, again, early can better determine cause of labyrinthine trouble, if due to some middle ear trouble or infection, or irritation is primary in labyrinth (rare) or has traveled from endocranium. Deafness, dizziness and nystagmus are symptoms of labyrinthitis. When fever, headache, vomiting and episthonus are present pus has already entered cranium.

As our means of diagnosis in affections of internal ear were so few—speaking voice, watch, tuning fork—Rinne and Weber tests,—Von Stein equilibrium tests, etc., we are glad of the experiments in

reference to irritability of semi-circular canals and associated movement of the eyes as shown by experiments on animals,—(Ewald and Hoegyér) and the consequent rhythmic nystagmus thus produced as further elicited by Barany, Ruttin and Newmann both pathologically, experimentally and physiologically, and this further aid to diagnosis of disease of inner ear.

As much of this is rather in province of physiology of semi-circular canals, and as such, I presume, is treated in that paper, I shall give little but the deductions and leave to the former paper the elucidation of the cause. Ewald opened the right bony horizontal canal and by making a slight puncture in the membranous canal several millimeters from ampulla toward smooth end, and there inserting a plug, closed the membranous canal. He then bored a second hole between the plug and ampulla. He then constructed a pneumatic hammer, a glass piston gliding in a small straight tube, the outer end of this tube being fitted with a bulb by which the air in tube could be compressed or rarified and the hammer forced in or out. On compression hammer pressed on membranous canal between inserted plug and ampulla, and because of closing of smooth end the endolymph was forced toward ampulla,—on aspiration endolymph moved toward smooth end away from ampulla. When endolymph was forced toward ampulla a slow horizontal movement of the head and eyes to left was observed, on aspiration when endolymph moved away from ampulla a gradual horizontal movement of the head and eyes to right, showing a definite relationship existing between a definite movement of the eyes and head and the direction of endolymph current in a certain canal. In experiments upon vertical canals also this associated movement of eyes and head by irritation of the canals was shown. In human only eyes move. By further experiments Ewald showed that ampullary hairs in horizontal canals exercise the maximum stimulation when they are directed from smooth end toward ampulla and least stimulation when directed toward smooth end away from ampulla. Ampullary hairs in vertical canals exercise maximum stimulation when they are directed from ampulla toward smooth end and vice versa. When turning head to right, head erect, both horizontal canals do not receive same degree of stimulation. At the beginning of the turning endolymph of right ear is displaced toward ampulla and in the left ear away from ampulla; therefore greater stimulation is in the right ear.

Each labyrinth stands in relationship to the adductors of same side

and abductors of opposite side. Increased stimulation of the right ear causes contraction of the right adductors and left abductors, and the eye turns slowly to the left followed by rapid movement to right, therefore nystagmus to the right during turning. After turning ceases endolymph current changes and we have horizontal after-nystagmus to the left. By means of turning we are able to produce a nystagmus in any desired direction. The nystagmus during rotation and also after-nystagmus depending upon position of head during turning.

Rule.—The line of intersection of a horizontal plane with the cornea will determine kind of nystagmus, while the direction of rotation specifies direction of nystagmus during act of rotation. After nystagmus is to opposite side. Nystagmus increases when looking toward side of rapid motion. Slow movement is due to labyrinth irritation, the rapid is return movement to establish equilibrium—nystagmus named from quick motion.

Florens Law.—Each semi-circular canal evokes ocular movements in its respective plane. When several canals functionate simultaneously the resulting nystagmus is in the planes of these canals; *i. e.*, compound nystagmus. Nystagmus is always toward the most stimulated labyrinth.

Vertigo.—Associated with nystagmus is vertigo. Apparent movement of objects during nystagmus is increased by gazing in direction of rapid motion, *i. e.*, toward right in horizontal nystagmus to right, and is lessened or ceases entirely in looking in direction of slow motion.

Sensation of falling.

Reactionary movement of body, tendency to fall, the direction of this will be according to this law. Movements of a body take place in same plane with nystagmus and the direction opposite to rapid nystagmic movement.

Rotary nystagmus to the right is a nystagmus in the frontal plane to right, the head being in an upright position and the reaction is therefore to the left.

Physiological horizontal nystagmus is seldom accompanied by nausea or vomiting except in cases of neurasthenia, rotary and vertical often accompanied by nausea. During nystagmus may notice a darkening field of vision or flashes of light. Some retain consciousness during nystagmus, while in others there is a loss of consciousness which in rare cases may become complete, this true in neurasthenia.

Nystagmus induced in healthy person by turning. Patient turned

ten times in a revolving chair (about twenty seconds) to right. Patient wearing dark glasses to prevent ocular nystagmus. Fixation of vision straight ahead diminishes the duration of horizontal after-nystagmus, but by turning the head in direction toward side of quick component it is again elicited. Baramy uses opaque spectacles. The primary nystagmus during turning is to right, to same side. After-nystagmus is to left, opposite side. The primary nystagmus is of shorter duration and longer excursions than the after-nystagmus. Nystagmus is increased in intensity when eyes are directed toward quick component and decreased or ceases when looking toward slow component. Nystagmus named from quick component and this is toward side of greatest stimulation. Rotary nystagmus named from quick movement of upper limbus of the cornea. Position of head and the direction of turning determine what semi-circular canals functionate.

Florens Law.—Eye movements evoked in same plane as the plane canal and Ewald's law.—Direction of the current of endolymph to or from ampulla gives relative stimulation of right and left labyrinth.

If head is erect while turning the horizontal pair canals functionate, causing horizontal nystagmus. If head is inclined ninety degrees to the shoulders the posterior vertical pair functionate and nystagmus will be vertical. If head is inclined ninety degrees forward or backward the anterior vertical pair canals functionate, causing a rotary nystagmus. In an intermediate position we have both horizontal and rotary.

If one side of labyrinth is diseased, that is, we have pathological irritative condition and patient is turned so that diseased ear is stimulated, the duration of nystagmus is about half as long as that produced by the stimulation of the well ear. The diseased or irritated vestibule is on opposite side to quick movement, of half enduring after-nystagmus. If we have entire destruction of labyrinth there is no response to stimulation of diseased ear.

Caloric Test.—It has long been known that cold water syringed into external auditory canal would cause vertigo, nausea and vomiting, while water at body temperature produced no ill effects. Several years ago Baramy, Rutin and Neumann began the investigation of hot and cold water in ear in the production of nystagmus. In healthy ear if we irrigate one ear with warm water, 120 degrees, head erect, we produce a rotary nystagmus to the same side. If we irrigate the

same ear with cold water, 78 degrees, head erect, we produce a horizontal and rotary nystagmus to opposite side. If head is inclined forward cold water causes rotary nystagmus to same side. Cold water can be used as low as 54-68° F. Hot can be used as high as 131° F. Have patient look toward side when you expect nystagmus as most marked when looking in direction of nystagmus. In a diseased ear, with an irritative, not destructive, lesion caloric reactions are the same in direction as in normal ear. If there has been destruction of one labyrinth there will be no reaction from that labyrinth. Use a fountain syringe, not ordinary ear syringe.

In acute cases temperature of the cold water must be lower than for normal ear, as local temperature is increased

By compression or rarification of air in external auditory canal, if there is a fistula present in horizontal canal the endolymph is put in motion producing a nystagmus. If vestibule is normal in irritability gradual excursions of the eye will be produced or a rapid nystagmus of several seconds' duration. Even if caloric reaction to cold water was slight or wanting, slight motions may be elicited by this method.

Very slight ocular motions have been observed as a result of compression and rarification without a fistula, but there caloric reaction is normal. Normal caloric reaction with fistula has long slow movements of eyes. Direction of nystagmus differs in different cases, but always opposite for compression and rarification.

When nerve endings are destroyed by inflammation or removed by operation nystagmus suddenly and violently swings to the other side for a few days and then ceases. Nystagmus toward diseased side continuing after destruction of the labyrinth or its surgical removal show meningitis is present.

Spontaneous nystagmus always has its quick component toward the side of greatest irritation or stimulation in ear or brain. In cases of destructive labyrinthitis we can have no irritation of diseased side, so opposite side acts. Rotary nystagmus is always combined with nystagmus in another place, and accompanied by vertigo, nausea and vomiting which are often very severe. Nystagmus can also be elicited by galvanism; cathode gives nystagmus to same side, anode to opposite side. Best seen when eyes occupy extreme position in direction of rapid movement. This test of little use as yet in clinical practice.

By Baramy's fixation apparatus when spontaneous nystagmus exists the exact position where nystagmus ceases or is minimal is found and

the ear is then irrigated gently with cold water to test reaction of labyrinth to this added stimulation. If, for instance, spontaneous nystagmus is to diseased side and labyrinth does not respond meningitis or cerebral abscess is present, as in circumscribed labyrinthitis nystagmus is to diseased side but responds to caloric tests.

Nystagmus must be taken in consideration in intestinal auto-intoxication, alcoholism, nicotinism, hysteria, sea sickness, meningitis, brain tumor, hereditary ataxia, syphilis and labyrinthine inflammation with or without otorrhœa. Yet as purulent inflammation of labyrinth is never anything but a serious condition and outside of actual findings during operation these tests are the most reliable we have as to irritability or destruction of the function of semi-circular canals. If vestibular nerve is destroyed cochlear branch is also, as this has less resisting power. Therefore the study of normal and pathological reactions of labyrinth, as shown by spontaneous and elicited nystagmus, is one great aid to diagnosis of labyrinthine involvement, and as such I have made the following memoranda, principally from clinical lectures delivered at Cincinnati Hospital by Neumann during the past year.

Ballinger's Work on Ear—Kopetsky, Surgery, Ear and Present Status Labyrinth Surgery. Amer. Acad. Ophthal. and Otol., Sept., 1910. At this time will also mention that one of the best and fullest reports of this work is that by our own Dr. Ibershoff, of whose "Physiology and Pathology Semi-circular Canals" I have made free use.

Nystagmus to same side is caused by
Circumscribed labyrinthitis,
Water,
Cerebellar abscess,
Kathode.

Nystagmus to opposite side.

- a. Diffuse labyrinthitis.
- b. Cold water—Head erect, cold water with head forward causes nystagmus to same side.
- c. Anode.

Anterior vertical canal most sensitive to stimulation.

Turning examination of most value if you examine both ears. In diseased ears after-nystagmus is decreased. If there is but slight variation not pathological, in disease diminished to at least one-half. If you

wish to make a unilateral test, thermic tests are best, may also use galvanism. If patient has nystagmus after compression and aspiration tests, first his labyrinth responds, and second, he has a fistula. Polyps and cholesteatoma interfere mechanically with tests with water or air. Binaural injection of water is only of value in one-sided affections because labyrinths are stimulated to same degree at same time. Binaural injections if patient is normal and both labyrinths of same value cause no nystagmus but dizziness. If two sides differ we have nystagmus plus the dizziness.

Circumscribed labyrinthitis—nystagmus to same side in very rare cases, Newmann says, may go to well side. Caloric reaction nominal, if irritability of labyrinth is being impaired may be weak. Occasionally rotary nystagmus by turning will last longer than the normal horizontal nystagmus (always pathological). Where there is diminished irritability there is a moderate degree of rotary and horizontal nystagmus, a combined spontaneous nystagmus to both right and left, which is usually strongest to the diseased side, but sometimes to sound side. Upon inclining head quickly backward so that anterior vertical canals are in horizontal plane vertigo and rotary nystagmus lasting about fifteen seconds and directed to diseased side takes place in about 50 per cent. of the cases. If wait about ten minutes can repeat the experiment, but not at once.

Horizontal after-nystagmus is decreased. If fistula is present there are eye motions in response to compression and rarification tests. In fistula when membranous labyrinth is intact, reaction of diseased side to cold water is greater than sound side. This is due to absence of tympanic membrane and bony covering or to greater vestibular sensitivity.

Absolute destruction labyrinth on one side or in diffuse labyrinthitis we have strong rotary and horizontal nystagmus to sound side accompanied by severe vertigo, nausea, vomiting, inability to walk, patient lying on sound side.

Absolute deafness—caloric reaction negative, nystagmus decreases rapidly. As nystagmus decreases a horizontal nystagmus to diseased side often appears (not yet explained).

After a few weeks the active symptoms have disappeared as described under acute destruction of labyrinth and only symptoms of latent destruction of labyrinth are present with weak rotary nystagmus when eyes are in extreme lateral position somewhat stronger to sound

side. If we use opaque spectacles there may be slight horizontal nystagmus to sound side. Caloric test is then negative in diseased ear. In sound ear cold water usually produces strong rotary nystagmus to sick ear. Galvanic test, negative, aspiration and compression negative.

Nystagmus same in early stages meningitis and cerebellar abscess. Meningitis has a temperature usually high and continues so. Cerebellar abscess, temperature normal or little subnormal. Cerebellar abscess, nystagmus is to diseased side, if sufficiently large to encroach upon median line also to opposite side.

Instead of growing weaker as vestibular nystagmus does and ceasing rotary in twenty seconds, forty seconds horizontal, physiological nystagmus, or in a few minutes to several days in pathological vestibular nystagmus, this nystagmus constantly increases without tendency to cease. Increasing nystagmus to diseased side with negative reaction to caloric test, point to cerebellar abscess. Increasing nystagmus to opposite side may be due to a large abscess irritating opposite side Deiter's nucleus, if with deafness and intact tympanic membrane, think of tumor along vestibular nerve or circumscribed meningitis may be present with suppurative labyrinthitis and labyrinth will not respond to caloric or turning tests.

If nystagmus is away from side of diseased ear and labyrinth of diseased ear not responsive impossible to differentiate between cerebellar abscess and labyrinthine disease until after removal of labyrinth, when if it still persists after four or five days of changes to diseased side it is of cerebellar origin.

If one labyrinth is destroyed and you have nystagmus it is either from other labyrinth or cerebellum. If from sound ear, hot and cold water will effect nystagmus if used in healthy ear. If from cerebellum, not influenced by water irrigation. If labyrinth is all right you may cause a different nystagmus from one spontaneously present.

These tests for irritability of labyrinth by inducing nystagmus, valuable though they be, yet like all Utopian dreams, have their limitations and drawbacks in actual practice. The condition, mental and physical, of the patient in acute invasion of the labyrinth, is often such as to either preclude their use or render them inefficient.

Especially in children, where caloric test especially might be dangerous in suppurative inflammation of the middle ear when the pus had not really entered the labyrinth but only irritation was present and where any excess pressure on stapes, cholesteatoma, or sequestered

bone, forcing even a sterile liquid into tympanic cavity might force germs through a fissure into labyrinth, in these cases nature often throws up a barrier in form of granulation tissue and prevents further infection.

Richards and Kopetsky consider fistula and erosion of the outer capsular wall of the labyrinth are symptoms rather of efforts of nature to expel pus within the labyrinth, than a tendency for pus to encroach upon endocranium and thus caloric test or air compression is rather dangerous in acute purulent inflammation of middle ear. By causing backward pressure upon purulent contents of labyrinth and possibly breaking through the delicate protective barriers which nature had thrown out against further infective invasion we may change a circumscribed to a diffuse labyrinthitis.

Baramy recently stated that the vestibular tests are not sufficiently delicate to enable us to diagnose trifling diseases of labyrinth, nor do they enable us to determine just what are the pathological changes occurring in the labyrinth. Jensen holds that caloric reaction has often not disappeared at precise time when the surgeon would have most favorable time to operate, also that pus may reach brain before loss of vestibular function is manifest. He believes that only negative finding is of value. Where vertigo is pronounced caloric test is of no value, or when it is, only present when turned toward diseased side.

Ballinger thinks caloric tests can be used with gentleness in cases of acute suppuration.

As prevention is better than cure, during radical mastoid, care must be taken to prevent trauma of the stapes, or breaking away any protective barrier around oval window or in fistulous tracts and thus cause infection of labyrinth. During radical mastoid operation have anæsthetist watch not only face for twitches from facial while removing posterior wall of the meatus, but also eyes for signs of elicited nystagmus during removal of the malleus and incus and during cleansing of the tympanum. The slightest touch on stapes will show itself by nystagmus and warn surgeon. Also do not remove granulations around oval window or superficial erosions on arches of semicircular or upon promontory, as these are often nature's protections, and if destroyed we may cause spread of infection if only circumscribed.

The sudden appearance of facial paralysis is given by Kopetsky as one of the symptoms in involvement of the labyrinth during acute suppuration of the diseased middle ear and mastoid. Occurs with sudden rise in temperature, nausea, vomiting, spontaneous nystagmus.

REPORT OF CASE—SEQUESTRATION OF PARS PETROSA.

GEORGE A. SHEPARD, M. D., O. ET A. CHIR.,

New York City.

J. H., aged 16, entered the New York Ophthalmic Hospital for operation January 15, 1908, from the clinic of Dr. Wm. E. Rounds. Owing to ill health Dr. Rounds requested me to operate.

History of the case is rather imperfect, but the salient features given me by Dr. Rounds are as follows: Since early childhood the patient had had discharge from the left ear; six weeks ago, when first seen in the clinic, was suffering from acute mastoid symptoms. Operation was advised, but it was refused. When next seen in the clinic, January 13th, he presented the following picture: Total loss of hearing on left side. Marked swelling of the left side of the head, extending from the frontal eminence to the occiput, total left facial paralysis, greatly restricted motion of the maxilla and severe pain. Partial paralysis of the left lower extremity had existed for several days. Temperature, 100.6° ; pulse, 80; respiration, 18.

Operation, January 14th, 7:45 P. M.

Extensive necrosis of the bone was found involving the anterior and posterior walls of the canal, the glenoid fossa, the superior and interior walls of tympanum and antrum exposing the middle and posterior fossæ for over two inches. The facial nerve was absent from its entrance into the tympanum to well down in the posterior wall at which point the frayed ends of the nerve could be easily seen.

The temperature at the time of operation was 100.6° , and from that time until the first dressing on the 17th varied from 98.2° to 100.8° . The patient was drowsy but complained of slight pain. Daily dressings were made until March 20th, at which time the healing had been completed except over the labyrinth, which bone remained white and dry. At different times portions of this bone were removed with the ronguer. Dressings were very difficult owing to prolapse of the temporal lobe, which almost completely covered the labyrinth. At no time until March 18th did the temperature return to normal. March 7th the temperature suddenly rose to 101.2° accompanied by extreme

pain, twitching of the face and limbs and coma lasting two days, then all symptoms subsided until temperature was normal on the 18th. At his earnest request he was allowed to return to his home in the country on the 20th.

He was seen weekly until July 17th, when he came into the hospital again with a temperature of 101.6° , but left the next day when further operation was proposed. Weekly visits were continued till the last of August, when, during my vacation, he showed all the symptoms of thrombosis of the cavernous sinus followed by atrophy of the left optic nerve. November 2d he again came into the hospital with a temperature of 101.6° , drowsy, but complaining of no pain. An attempt was made to remove the sequestrum, which included what was left of the petrous portion of the bone. This was followed by a temperature of 102.8° and three days of coma. In two weeks temperature was about normal, and so remained until December 4th, when there was a sudden rise to 101.2° with pain, twitching of the face and limbs and two days of coma. As this followed another attempt to remove the sequestrum, I decided to leave it alone and let nature take its course. The bone was easily movable, but was held in position by the carotid artery which was exposed in the wound as it passed into the canal in the bone. In April the bone around the artery had absorbed enough to allow of the removal of the last piece and complete healing quickly took place and the patient returned to his home. The vision of the right eye has since been lost through atrophy of the optic nerve, and the partial paralysis of the left lower extremity persists.

This case is of interest as showing the powers of recuperation in the human body, with a result not worth the cost. If the patient had been more amenable to reason and allowed a second operation for removal of all the diseased bone, the result would probably have been more happy either in his death or in the saving of his vision.

HYPERÆMIA OF THE LABYRINTH.

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HYPERÆMIA of the labyrinth is an affection with marked variation in its symptoms, intensity and duration. It is often secondary to an inflammatory condition of the middle ear or of the meninges, and here its symptoms are in a measure intermixed with those of the primary disease, and may also be more severe than when it occurs by itself as a primary affection. It may also be associated with congestion of the head from any cause, whether in febrile affections, from overviolent exercise, from alcoholic stimulation, or from the action of drugs like quinine, salicylic acid and its compounds, or amyl nitrite. But there is a primary form, somewhat rare, which occurs, independently of any inflammatory process or congestion elsewhere, as a strictly localized affection, perhaps due to vasomotor disturbance. The symptoms present in these cases are in general: deafness of varying degree, but sometimes hyperæsthesia; tinnitus, usually pulsating; sensations of fulness and pressure in the ear; vertigo; and sometimes nausea and vomiting. Sudden and violent cases may so resemble Ménière's disease as to make diagnosis difficult until some time has elapsed and the outcome been determined. The less violent cases may show a marked tendency to recurrence at irregular and sometimes short intervals. The symptoms present may also vary considerably in accordance with the part of the labyrinth which is affected, since it is possible that instead of involving the entire labyrinth the hyperæmia may be practically limited to either the cochlea or the semicircular canals. Of course when the somewhat rare primary cases are thus further limited we are dealing with still greater rarities, but the presentation of these unusual forms of the disease is the main purpose of this paper. I am going to cite two cases from my personal experience in illustration.

CASE I.—December 2, 1907, Mr. ———, age 39, height 5 feet 8 inches, weight 134 pounds, of nervous temperament, was referred to me for examination and advice by his family physician. For a year, previous to August last, he had been under considerable mental strain.

He had also, for three successive years, been troubled with hay fever. His general health suffered from this combination, and he became nervously exhausted and lost 16 pounds in weight. He also developed a tinnitus aurium, following an attack of hay fever, which has now persisted for about 16 months, the sound varying in intensity and compared to that from a "peanut roaster." The hearing became somewhat defective, and this, too, was noted to be variable, in accordance with atmospheric and other influences.

Eight or ten months ago, while under the nervous strain, attacks of vertigo began, which would cause him to reel when walking, and culminated in sour vomiting. This vertigo was relieved after lying several hours upon the back. The hearing was not noticeably influenced by these attacks. They occurred every two or three weeks until he rested for a month last summer. During this rest, and for a fortnight succeeding it, no vertigo occurred. Latterly these attacks have been increasing in frequency until he now has one every three or four days. The dizziness begins after eating, or in the night, with an increase in the tinnitus and a "wavy" feeling in the head, followed by a "tightening up" at the back of the head, which becomes so severe that moving the head hurts "way down the spine." This is followed by vomiting and in about fifteen minutes things begin to go around—from right to left on the horizontal plane. He claims there is always one position into which he can turn the eyes and stop the motion, this being usually way over at the right. Can sleep an hour during the attack and awake to find things still going around. He usually vomits only once but the nausea and retching continue for some time. The symptoms disappear gradually after about twelve hours. Tinnitus continues all through the attack, and when he becomes very tired changes from a constant, steady sound to a beating. The head is free from pain during these attacks. Although these seizures make him exceedingly nervous he feels markedly better in general health upon the day following the attack. Violent blowing of the nose sometimes causes nausea, dizziness and a strong tendency to walk toward the right. (Traction with the pneumatic speculum causes the same result.)

Autophony is often present in disagreeable form, the sound of the voice "seeming to strike into the top of the head." There is also at times an almost painful oversensitiveness to noises, even the closing of his mouth makes a distinct and disagreeable noise in the ears, the piano becomes "jangling" in tone, sounds seem to be heard twice as though

there were a double impact upon the drumhead, and he has noticed split notes from both the piano and whistle.

No hereditary tendency to aural trouble exists. Postnasal catarrh has been present for many years, but not in severe form. The breath is free from odor and the sense of smell is not affected. The digestion and appetite are ordinarily good, and there is no marked tendency to constipation. No alcoholic stimulant or tobacco has been used for past five months—and they have never been used to excess. The eyes have received preliminary testing and will be thoroughly examined.

Examination of the ears showed a lustrous drumhead, in good position, upon the right side, and a slightly thickened and depressed drumhead upon the left side. The nasal septum presented a marked deflection, due to a heavy blow from a polo stick, with ridge upon the left side and corresponding depression upon the right. There was also a septal perforation said to have been caused by diphtheria in early childhood. The Eustachian tubes were unusually free. The fork C and C₁ upon the vertex was heard somewhat better upon the right side. Bone conduction was slightly better upon the right side, and air conduction was better upon the left. All forks from C₁ to F₄ were heard upon both sides and the Galton whistle was 0.6 upon both sides.

H. D. R. w. (40") = c = $\frac{1}{2}$ " gentle inflation. Voice = 20' medium whisper.

H. D. L. w. (40") = 14" = 14" gentle inflation. Voice = 20' low whisper.

The following letter was sent to the family physician: "I cannot think that the condition of the ear is primarily the cause of the attacks of vertigo, etc. I think the cause must be sought elsewhere—the first presumption being, of course, that it lies in the stomach. There is a strong reflex influence upon the labyrinth at the time of the attack which gives rise, in my present opinion, to a hyperæmia of the semi-circular canals which subsides in the course of twelve hours or so. I do not think there is a definite effusion there because of the way in which it clears up, every time, afterwards. The tinnitus I associate rather with the underlying catarrhal condition of the ear than with the occasional hyperæmia—but the liability to the latter limits the scope of treatment for the relief of the noise at the present time.

I think you are following the right course to eliminate other organs than the stomach from the problem in seeking the primary cause of the attacks. I am glad the eye is to receive full examination and correc-

tion. Mr. ——— informs me that the heart, kidneys, etc., have already been gone over without result. Let me suggest that, if you have not done so, you have an examination from the strictly nervous standpoint by a nerve specialist. A reflex upon the labyrinth, of the kind which I suspect to exist, might readily come from the cerebellum, for instance.

"As to remedy, have you tried giving him a vial of gelsemium (2x, 3x or 4x) to carry in his pocket and take at short intervals—ten minutes or so—on the first premonition of an attack? Of course, the cause must be established before your treatment can be exact, but you may find this well worth trying in the meantime."

This case was under observation and treatment, in conjunction with the family physician, from December 2, 1907, until November 8, 1909—nearly two years. A large variety of subjective symptoms were experienced and reported during this time, vertigo, oversensitiveness to noises and different types of tinnitus being the most constant. A recurrent symptom was a feeling of heaviness in the head "as though it had been allowed to hang down until full of blood." Attacks of vomiting, in connection with the vertigo, occurred at varying intervals and were especially induced by mental fatigue. The hearing responded to the treatment but never remained very constant. The highest point attained by the right ear was 11½ inches (for the 40 inch watch) before treatment, and 13 inches afterwards. Upon the left side the highest points were 25 inches before and 37 inches after treatment. The local treatments consisted of occasional gentle inflations, sometimes with iodine vapor, and the high frequency current. Vibration in any form did not serve well. At one time an experimental incision was made in the right drumhead on account of distressing tinnitus and autophony and a slight opening remained for several weeks, always perfectly dry. Considerable relief was obtained by this procedure, but the opening subsequently healed. The most marked results, especially upon the hearing, were obtained by using a glass bulb electrode, which showed a dark red color when the current was passing, and applying this, with moderate current, back of each ear, and at the back of the neck, for a minute in each position.

The eyes received treatment by Dr. John H. Payne for a period of eighteen months. He found mixed astigmatism and decided exophoria with marked weakness of the internal rectal muscles. Glasses were fitted and the eyes trained by the stereoscope and loose prisms until correction was nearly perfect. He considered the condition of the

eyes to be not more than a contributing cause to the vertigo and associated symptoms. The nose was also operated upon by Dr. George B. Rice, at my suggestion, in November, 1908, on account of increased irritation and aggravated reflexes. Dr. Rice removed a septal ridge on the right side of the nose, and the lower part of the middle turbinate upon the same side. Later he cauterized the inferior turbinates, posteriorly, upon both sides. Marked improvement resulted from this operative work. Examination by a neurologist, from a strictly nervous standpoint, threw no new light upon the case.

Internally, many remedies were tried at different times—gelsem., glon., ferrum phos., bell., cocculus, lach., nux vom., silicea 6x and cc., etc. At one time the sense of taste and smell became lost almost completely, and it was only after some months that they returned even in part. Strych. phos. 3x seemed to help in this direction. On the whole, more benefit seemed to be derived from the quick use of gelsem. to ward off attacks, than from any other remedial action, and he carried his little bottle in his vest pocket for months. Gradually he overcame the tendency to the distressing attacks, and on March 23, 1911, he called upon me, voluntarily, to report his good health and his gratification in the apparent permanency of the relief obtained.

Here was a neurasthenic patient subject to vasomotor disturbances, the true existing cause of which was often obscure, but the brunt of which was borne by the right labyrinth. Whether any actual effusion ever occurred here before the patient consulted me I cannot say, there was no definite history to lead me to think so. Certainly after he came under my observation no real effusion occurred. The pathological condition to my mind was a hyperæmia of the labyrinth, which was practically limited to the semicircular canals. I think it should be considered a hyperæmia rather than a seated congestion chiefly because of the rapidity with which the attacks sometimes developed, their comparatively short duration, their very rapid subsidence upon some occasions, and the completeness of the recovery at all times.

CASE 2.—October 1, 1910, Miss ———, age 48, referred to me for treatment by a general practitioner in whose care she has been for over a year. For three years past has been troubled with sensation of fulness and deafness in the right ear, and at first received treatment, chiefly by inflations, at two large public clinics. At the second of these a student was told by the physician in charge to give her an inflation. He used the Politzer method but instead of placing the olive in the nostril placed it in the right external meatus and blew heavily at the

moment she swallowed. The result was extremely painful, and ever since then, for almost a year and a half, she has been subject to distressing attacks of suddenly augmented fulness and pressure in the ear which tax her endurance to the utmost limit, and which nothing has yet been found to relieve. The fixed condition is one of marked deafness on the right side with a never-ceasing tinnitus like the noise of the surf, or the noise of machinery. There is no autophony at any time, no sharp pain, no throbbing and no nausea or vertigo. There is no especial tendency to headache. Is sometimes oversensitive to noises. There is slight postnasal catarrh. The attacks for which she seeks relief are sudden, and it is difficult to assign any exciting cause. The predominant symptom is the extremely distressing fulness and pressure, distinctly localized within the right ear, sometimes accompanied by a sensation of burning heat, but not by any true pain, *and never causing either nausea or vertigo*. The attacks, which sometimes last for several hours, are often followed by great prostration and mental depression. Examination shows both drumheads thickened and depressed. The sound of the C and C1 fork, vibrating upon the vertex, is not referred to either ear. Air conduction is better than bone upon both sides. All forks are heard clearly. The Galton whistle is 4.8 right and 0.3 left.

H. D. R. w. (40") = O = O high frequency current.

H. D. L. w. (40") = 29" = 33" gentle vibration.

This patient was seen by me once a week for fourteen weeks and faithfully followed all directions in her intense desire to be relieved. Before she came to me she had been given, without avail, aconite, bell., china, quinine 3x, ferrum phos. 2x, puls., ignatia, nux, chamomilla, silicea 2x, antipyrin, aspirin, bromides, veratrum viride, and ergot, and there had been used locally opium, bell., cocain and glycerine. The ear was absolutely intolerant of inflation, even in its gentlest form.

I tried gelsem., verbasum, bell. and fer. phos. in various potencies, and glonoine. In the office I tried the high frequency current and the leucodescent lamp. Locally, during the attacks, I had her try adrenalin, mixture: of adrenalin with bell. tincture and with cocain, verbasum oil, and finally a mixture of chloroform 2 drachms and menthol 1 drachm in 2 ounces of olive oil, rubbed around the ear and placed upon cotton within the meatus.

There was some measure of relief afforded by the glonoine and the

chloroform and menthol—a restraining action at least—but that was all.

She left me finally, realizing that I had used my utmost endeavor to relieve her but naturally disappointed at the meagre result. I do not know but I presume she is now taxing the experience and resources of some other specialist among the goodly number in our city.

One interesting fact remains to be stated. Suspecting that there would be found to exist some gaps in the musical scale I asked her to test her right ear by the entire chromatic scale upon the piano, note by note. She brought me word that she failed entirely to hear F sharp, G sharp, A sharp and B in the middle octavo and the entire octavo above this.

Here is a case in which I believe the distressing attacks to be due to recurrent hyperæmia of the labyrinth and the area to be limited to the cochlea—the semicircular canals apparently escaping any involvement.

To emphasize certain aspects of the subject I wish to present briefly a third case in this connection.

CASE 3.—November 28, 1898, Miss ——, age 28, was referred to me by her physician for treatment. During the current month has had an unusual amount of headache, the pain centering behind the eyes and in the temples, worse upon the right side. Nine days ago a vertigo developed, associated with throbbing in the right ear. Was quiet at the time of its development and had been resting for a week in the country. The vertigo consisted of revolutions from right to left upon the horizontal plane. During the first night following the development of the vertigo she fell twice upon the floor, with an interval of one hour, upon rising after a nap, and she has fallen once since then. There was no absolute loss of consciousness at either time. Since its first appearance the vertigo has persisted and also the throbbing—the former increasing. At first there was no accompanying nausea, but during the past three days this has developed—a constant nausea unassociated with disturbance of either the stomach or bowels. At night there is dull, growling pain in the right ear, which is not constant. The supersensitiveness to noises is very marked. There is no tinnitus. Examination shows both drumheads perfectly normal in appearance. The C fork vibrating upon the vertex is heard entirely upon the right side. Air conduction is better than bone upon both sides. The F₄ fork is heard distinctly upon the right.

H. D. R. w. (40") = 53".

H. D. L. w. (40") = 9'.

This patient was under treatment for fourteen days. She had received *coccus* and *tabacum* without benefit before consulting me. My first prescription was *gels.* 2x, which was taken for two days without any benefit whatever. She then received *fer. phos.* 6x, and on the following day the nausea disappeared, but the vertigo still continued and all movements of the head or body were very disagreeable. The same remedy, with lengthening intervals between doses, was continued for nine days with gradual improvement in all symptoms. On the seventh day the vertigo was better but there was still disinclination to walk, with lurching toward the right when it was attempted. In two days more the vertigo disappeared. There then occurred spasmodic, boring pain in both temples with marked oversensitiveness of the eyes to light, and she received *bell.* 3x, which was continued for three days. At the end of this time recovery was complete, the appetite and general condition good, the walking steady, and the patient anxious for work. The only effect upon the hearing throughout the attack was slightly increased sensibility, her hearing being naturally acute.

Here was a case in which there could have been no general effusion in the labyrinth as the cochlea seemed to have escaped involvement. In the semicircular canals, however, there was far more than hyperæmia. There was at least a seated congestion of long duration and possibly an actual effusion. The completeness of the recovery within the last five days of the attack, after the vertigo once began to yield, would seem, however, to be an argument in favor of congestion rather than a more profound pathological lesion.

There seems to be a tendency at present, especially among neurologists, to speak rather loosely about Ménière's disease. The diagnosis of any condition in which the predominant symptom is auditory vertigo is apt to be dismissed offhand with this name. Those who are somewhat more particular confine the name "Ménière's disease" to cases where there is an actual labyrinthine apoplexy or effusion, and rather loosely group all irregular, simulating cases under the head of "Ménière's symptom-complex." That is about as convenient as the term "heart-failure" and just about as exact. Let me plead for greater precision in diagnosis and in nomenclature, especially among aurists in speaking of these conditions. It is my hope that this paper will help to elucidate these conditions to some of my hearers, and the terminology which should be employed in describing them, and also that it will help, in some slight degree, in the direction of treatment, which, in the main, has been most unsatisfactory in all cases of this nature.

SOCIETY.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Annual Meeting Held in Philadelphia, Pa., May 29, 30 and 31, 1911.

(From the Medical Record.)

Monday, May 29—First Day.

VASOMOTOR DISTURBANCES OF THE UPPER AIR TRACT.—Dr. Charles W. Richardson, of Washington, D. C., called particular attention to the difference between the perennial and paroxysmal vasomotor catarrh, and discussed only the perennial type. He referred to the investigations of Bidder and Volkmann, as well as Buch's experiments on the sympathetic, and to the fact brought out by these investigators that the sympathetic nerve was non-sensitive only in a healthy condition. When the nerve became hyperemic it was extremely sensitive to pain. Through this hyperemic nerve various reflexes of a sensory, motor, or vasomotor catarrh could be produced. The speaker divided the perennial type of vasomotor catarrh into four different classifications, treated largely of the constitutional character of these disturbances, and considered that they were more of a general type than due to local inflammatory changes within the passages, the toxin or irritant being produced through changes in the fluids and tissues of the body.

Dr. Delavan, of New York, in referring to a case cited by Dr. Ingals, considered one of the most interesting features to be the fact that after the use of the serum treatment the patient, although exposed to quite as inclement weather as formerly, had not nearly so severe symptoms as previous to its use.

Dr. Coakley, of New York, said that he had seen many of these cases and believed local treatment to be of little or no avail. He considered these conditions to be dependent on some derangement of the internal secretions attended by a peculiarly irritable condition of the nasal mucous membrane.

Dr. Coffin, of New York, agreed with the former's remarks, and gave briefly the report of one of his own patients, in whom the condition was shown to be due to some autointoxication.

Dr. B. R. Shurly, of Detroit, stated that these conditions were almost exclusively associated with people of high tension and peculiar nervous

temperament, nearly all patients being among the intellectual classes. He considered local treatment inadequate, and suggested that this condition in the nose was usually associated with a vasomotor disturbance in some other possibly remote part of the body. He believed that the internal secretions played a very important part. In the line of therapy his best results had been obtained through the use of valerian and other general sedatives, and by the hypodermic use of citrate of iron, which had a very quick and sharp effect on the general nervous system and blood stream, adding tone to the entire vasomotor system.

Dr. Thrasher, of Cincinnati, mentioned two expedients for the relief of the most troublesome symptoms; one was the free incision of the turbinal bodies, giving free exit for the accumulated fluid; the other, the hypodermic use of adrenalin in doses of from 5 to 10 minims (1-1000) once or twice a day.

Dr. Logan, of Kansas City, called attention to the cauterization of the highest part of the triangular cartilage, which he had found of more value in relieving the turgescence than any other local application to the turbinal body. He also mentioned good results from the use of bromides, and the application of the galvanocautery to the anterior tip of the turbinate and local area of the triangular cartilage.

Dr. Norval H. Pierce, of Chicago, agreed with regard to the beneficial results obtained from following Professor Killian's methods. He cited an interesting case of vasomotor disturbance due to the eating of raspberry pie, to which the patient was extremely susceptible.

Dr. Coolidge, of Boston, considered the question from the standpoint of lack of immunity in the body fluids, this making some susceptible and others not. He laid stress upon the similarity existing between vasomotor rhinitis and the various infectious fevers, such as measles, scarlet fever, etc., in their manner of onset, and also regarding immunity.

Dr. Myles, of New York, advocated the cutting out of a section of the tubercle of the septum, making a complete section down to the junction of the perpendicular plate of the ethmoid where the triangular cartilage meets it. This was done either under cocaine or adrenalin. His theory was that by this procedure the transmitter of the irritation either to Meckel's ganglion or to the brain center was cut.

ATTENUATED TYPES OF SUPPURATIVE SPHENOIDITIS IN RELATION TO SO-CALLED POSTNASAL CATARRH, TO HEADACHE WITH MENTAL DAZE,

AND TO ASTHMA.—Dr. W. E. Casselberry, of Chicago, read this paper, stating that the sphenoid sinus being out of sight was out of mind until adrenalin's vasoconstrictor effect availed to facilitate reaching it by operation, when the frequency of its infection as a primary source of postnasal discharge became evident. The secretions of the attenuated infections appeared, not as typical pus, but as variously modified puruloid products, most, though not all, of which might be grouped in two classes. First, those varying from pus to mucopus, which did not form a varnish-like film nor induce atrophy, but tended rather toward edematous hyperplasia, an intensification of which, lacking previous emphasis, was a prolific polypoid exudate, forming layer upon layer at the site whence polyps had been removed, as if a fresh growth of polyps had sprug up over night. The second class included the viscid mucilaginous, sometimes fetid, secretions, which, when copious, formed into long ropey strings, defying ordinary means of expulsion. When rather scanty they varnished the pharyngeal wall, inducing atrophic or dry pharyngitis, and accumulated in the nasopharynx in brownish splotches, comparable only to liquid glue, which, when "set," formed adamantinelike crusts, liable to require the leverage of a probe to pry them loose. The osteum sphenoidale itself was located out of sight, nor was it visible by reflection from the rear unless marked by a bead of pus, a protruding polypus, or a probe. However, in the rhinoscopic image, just outside the osteum, could be seen a portion, 1 cm. in length, of a probe which had been properly inserted in the sphenoid sinus. As this means of verification gave the most satisfactory assurance of precision to the diagnostic tests which followed it, the author had sought by perfecting the technique of the rhinoscopic examination with the cannular probe in position to render it generally available. Thus, to prevent the cannular probe from slipping out it was anchored to the dorsum of the nose by a flexible wire and a piece of rubber plaster. To facilitate the anchoring and to avoid the annoyance of having to withdraw the probe to reintroduce a cannula for the irrigation and aspiration tests, a combination cannula and probe of original design was used. Tapping the inner wall of the sinus served to elicit another characteristic sign, which was termed the sphenoid click, as if the bone were almost but not quite bare, accompanied by a leaden metallic click, a combination peculiar to the healthy sphenoid and not due to dead bone. In diagnosis the irrigation test was of first importance. From

fifty to sixty private cases had been recorded under the diagnosis in part of suppurative sphenoiditis, although in less than one-eighth of the number was the infection limited absolutely to the sphenoid without involving the postethmoid cells or other sinuses. With respect to postnasal catarrhal conditions, including atrophic or dry pharyngitis the conclusion was reached that after the exclusion of antrum disease, adenoid growth, or clefts, Thornwald's bursa, and pronounced posterior turbinated hypertrophies, practically all other chronic postnasal puruloid discharges were due to suppurative sphenoiditis, either alone or with implication of other sinuses. With reference to headache: The best description was by a university professor, who said "it was a boring pain toward the middle of the head far back between the eyes." More often it was located in the back of the head, but connected also with pain far back in the eyes, and next the top of the head or the side near the top, or radiating from the ear and mastoid to the top of the head; one-third of the sphenoid cases suffered from occipital or parietal headache; in one when the probe penetrated the sphenoid sinus it liberated an orange-yellow discharge, with cessation of the pain. Another was conscious of a dazed mental state, on whom a double Hajek operation resulted in free drainage of the sphenoids and cessation of symptoms. Commonly when, with a probe or sphenothmoid cutter, one touched the postethmoid and adjoining face of the sphenoid, the patient exclaimed at suddenly feeling a sharp pain at one or more of these five points—the back of the head, the top of the head, the eyes, the ears, and upper jaw. Merely touching with a cotton applicator the site of the sphenopalatine ganglion had caused patients to remark that it was the right spot, as it excited the same kind of pain or suggestion of neuralgia as that for which they sought relief. The ganglion bordered the floor of the postethmoid cells and the sphenoid wall, and connected with the nerves distributed to the five painful parts, which indicated that sphenothmoid disease was capable of exciting the ganglion, and so of causing headache of the type described. Nevertheless mere distension of the sinus by fluid or gases could cause headache of the deep-seated boring description. With reference to asthma: About one-third of the series were asthmatic subjects; in several the sphenoid region was a dominating feature, and in a few it was the only site of attachment of polyps. A recurrence of asthma was observed in conjunction with an acute exacerbation of

chronic sphenoiditis, also with a severe initial attack of sphenoiditis. Believing the benefit of removal of the nasal exudative features of asthma to be proportionate to the thoroughness of the operation, the author had of late years supplemented earlier treatments by removing any residual polypi found in the sphenoethmoid sulcus, with the effect of gaining a distinct reduction in the patient's residual asthmatic tendency. Twenty-four intranasal operations were performed on seventeen private patients. Usually only local anesthesia is employed. Resection of the middle turbinal was necessarily the first step, and the bulla, with other anterior ethmoid cells, if found diseased, were also eliminated on the way to the posterior group which then came in view. This the author called the back-bulla, as keeping this resemblance in mind aided in distinguishing it in the foreshortened perspective. The postethmoid group was dealt with as one structure, for one could not know, nor was it essential to know, how many individual cells it contained. The dominating principle of the treatment was free drainage or as nearly free as might be consistently possible. The palliative treatment was based on the principle that if the posterior nares and nasopharynx were kept clear of accumulated sphenoid discharge the catarrhal symptoms and initiation exterior to the sphenoid outlet would tend to subside and sphenoid drainage be improved in so far as the exterior swelling had impeded it. The same principle must have pertained to the amelioration of the symptoms before the real condition was thought of. As the cleansing process must be regularly maintained, it was essential to instruct the patient in a simple but efficient method—requirements met by the post-nasal type of douche with an alkaline solution weak enough to be devoid of irritating effect. With regard to the extent to which the sphenoid wall and postethmoid cells might regenerate it was believed additional portions need to be excised but that eventually they remained open. With regard to a cure, to approximate ordinary conditions, a less rigid standard of cure than total suppression would suffice, few individuals being altogether free from disordered secretion. If then nine-tenths or more of the distress and disability incident to the post-nasal discharge were eliminated, material mitigation of the asthmatic feature afforded, and the headache with possible mental deterioration wholly remedied, it amounted to a practical cure. In this sense a large majority of sphenopostethmoid sinus infections of the attenuated types specified were curable by the methods described.

FOREIGN BODIES IN THE ANTRUM.—Dr. James E. Newcomb, of New York, reported the case of a middle-aged man referred to him with postnasal discharge. Examination revealed in addition the existence of pulmonary tuberculosis. At the time of his first visit the patient was not transilluminated and the source of the discharge was not definitely made out. Under cleansing he remained without definite benefit and was seen again some months later. At this visit he was transilluminated and an empyema of the left antrum was definitely discovered. His general condition seemed to forbid anything more radical than perforation through a vacant tooth socket and insertion of a Myles' rubber antral tube. With this the drainage afforded was perfect and the patient was much relieved. He was very nervous and constantly working with his tongue at the tube, which was closed with a wooden obturator. On one occasion, while in the doctor's office, both tube and obturator were thrust into the antrum. It was supposed at first that they had fallen on the floor and search was made for them but they were not found. It was then surmised that they were in the antrum. A skiagram made by a competent operator failed to reveal them. The patient was instructed to keep the cavity clean and to return after he came back from the mountains, whither he desired to go for the summer. While there (patient's statement) he fell into the hands of a dental student who succeeded in removing first the tube and then the obturator and with the same delicate forceps with which Dr. Newcomb had failed. The patient's condition at the time of the accident was not good and he stood manipulation very badly at his office visits. After his return the pulmonary lesion steadily progressed and he died from it, with laryngeal involvement. Dr. Newcomb has succeeded in finding 50 cases of a similar accident recorded in the 20 years, and gave a list of references, alluding to some of the more interesting ones. The proper treatment of such cases was to open the antrum through the canine fossa provided search through a natural or artificial opening through a tooth socket did not reveal the foreign body. A small electric light should be used to examine the cavity and the latter should receive at the same time the treatment its condition seemed to indicate.

Dr. Makuen, of Philadelphia, mentioned a case of foreign body in the antrum consisting of the retention of a portion of gauze packing, in the removal of which he was compelled to curette the whole cavity over again.

Dr. Casselberry, of Chicago, considered that in the majority of cases where tubes were worn the patients became addicted to the habit throughout life.

Dr. Getchell, of Worcester, referred to a case of foreign body in the antrum consisting of a thickened plug of mucus. This was removed and recovery was satisfactory.

Dr. Coakley, of New York, referred to the difficulty encountered in the after-treatment of sphenoiditis, especially in keeping the opening patulous. He advocated, where the disease was extensive enough to warrant it, the external operation, where the incision was made alongside the nose, and where the opening could be kept open more easily. With reference to the case reported by Dr. Makuen, Dr. Coakley took exception to the curettage of the sinus. He believed drainage should either be restored to a frontal sinus so that Nature could take her course or else that the sinus should be completely obliterated.

Dr. Barnhill, of Indianapolis, agreed with Dr. Coakley, as to the more satisfactory manipulation afforded by the external route in grave cases of sphenoidal disease. He also seconded the remarks regarding curettage of the frontal sinus, believing in the complete obliteration of the sinus, or if drainage was to be secured the inadvisability of curettage.

Dr. J. Price Brown, of Toronto, mentioned a case of two foreign bodies in the antrum, both consisting of plugs of cotton.

Dr. Sluder, of St. Louis, added two cases of foreign bodies in the antrum, both consisting of plugs of bismuth paste, one remaining a year and a half, the other two years.

Dr. Myles, of New York, in relation to operations on the frontal sinus, said he had always had to remove the nasal processes of the superior maxillary bone, which could only be accomplished with a hammer and chisel. He never curetted the frontal sinus.

HOMŒOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONFIRMATION OF BROMIUM IN RHINITIS HYPER-TROPHICA CHRONICA.

HERBERT D. SCHENCK, B. A., M. D., O. ET . CHIR.,

Case 1 is a widow of 48, who sought relief from deafness in the left ear. This was first noticed about a year ago, but was probably of much longer standing. She has noticed occasionally a slight "stiffness" in the ears with rushing tinnitus in the left, aggravated at night. She has never had an earache, but has a history of many "colds in the head" following pharyngitis. Her mother and most of her mother's family are deaf. She had had treatment during the early summer and fall without improvement in the ear or tinnitus.

The following were the conditions noted: those usually found in otitis media catarrhalis chronica, that is, membrana tympani, thickened and retracted; the light spot almost obliterated. The pharynx showed thickening of the mucous membrane of the posterior wall. The turbinates, however, were of about normal size. There was a slight deflection of the septum to the left well back. The Eustachian tube opened freely.

R. H. D. W. V. = 750 c.m. R. H. D. Ac. = 1800 c.m. R. H. D. W. = 100 c.m.

L. H. D. W. V. = 45 c.m. L. H. D. Ac. = 450 c.m. L. H. D. W. = 7 c.m.

Pneumomassage was begun November 29, 1910, and was continued twice a week until January 19, 1911, without producing any change in the tinnitus. She was then given some vibratory massage with a soft rubber cylinder. At this time she complained of burning and smarting in the nose for which arsen. iod. 3x was given. Three weeks later the tinnitus had changed, that is about February 12th, from a rushing to a ringing, and she complained for the first time that she had for several weeks felt a soreness and burning through the nostrils, and that the mucous membrane seemed sore to the touch. With this there was some cracking at the edge of the nostrils.

Under bromium in Allen's Handbook there occur the following italicized symptoms: "Internal soreness of the nose with crusts; soreness, with swelling of the wings, with pain and bleeding on wiping it.

Coryza with soreness beneath the nose and on the margin of the nose with stoppage and soreness of right nostril." On these symptoms bromium 6x was prescribed on February the 12th, and by the 17th there was less soreness, less discharge. The medicine was continued but less frequently.

When she ceased treatment, February 27th, the tinnitus was much lessened and the left hearing was as follows:

R. H. D. W. V. = 100 c.m. L. H. D. Ac. = 800 c.m. L. H. D. W. = 15 c.m.

Case 2 is a school girl of 14 who had otitis media suppurative chronica in the right ear following scarlet fever in May, 1910. She had had an earache when three years of age, but never afterwards until the scarlet fever. There was no family history of deafness, but there is a history of frequent tonsillitis and "colds in the head" during the fall and winter. She was in good general health.

R. H. D. W. V. = 100 c.m. R. H. D. Ac. = 300 c.m. R. H. D. W. = $3\frac{1}{2}$ c.m.

L. H. D. W. V. = 850 c.m. L. H. D. Ac. = 1800 c.m. L. H. D. W. = 90 c.m.

The right canal was filled with an offensive, bland, mucopurulent discharge, with a large posterior perforation in the membrana tympani. The articulations of the ossicles could be seen. The mucous membrane was considerably swollen. This case was first seen February 18, 1911. By March 4th the odor and discharge from the right canal had greatly decreased from the use of peroxide of hydrogen twice a day. She complained of soreness in the mucous membrane of the nose, and of cracks and soreness around the alæ nasi. Bromium 6x was prescribed every three hours. In a week the soreness and cracking of the nose had disappeared and the discharge from the ear had greatly lessened. By April 1st there was very little discharge, when she broke her knee cap and had to cease treatment. At this time the hearing was as follows:

R. H. D. W. V. = 330 c.m. R. H. D. Ac. = 700 c.m. R. H. D. W. = 24 c.m.

L. H. D. W. V. = 1000 c.m. L. H. D. Ac. = 1800 c.m. L. H. D. W. = 200 c.m.

The bromium was prescribed largely because of the soreness of the wings, as noted in case 1, and the watery discharge, and very promptly relieved both symptoms.

CONFIRMATION OF ARSENICUM ALBUM IN DENDRITIC KERATITIS.

A man about 52 years of age, the superintendent of a job printing establishment, who was in fairly good general condition, consulted me first July 2, 1909. He had had trouble with the left cornea for about ten days, and some local treatment by his physician.

Symptoms recorded were: a dense central haziness, occupying $\frac{1}{4}$ the corneal surface, with moderate photophobia aggravated in the morning, moderate bulbar redness, pain, aggravated at night; a rather profuse lachrimation. The patient was peevish, irritable and restless. His tongue was furred and dry.

The eye was bandaged and one instillation of atropin, 4 gr. to the oz., was made, and the diet carefully regulated. *Rx.* *Nux vomica* 3x, one pellet every two hours, on account of the irritability and aggravation.

On July 5th there was no change in the appearance of the eye, and the pain at night, lachrimation and restlessness, aggravated from 1 to 3 A. M., were present as before, with great morning photophobia and heaviness. *Rx.* *Arsen. alb.* 3x, 2 gr. every two hours. Atrop. was instilled as before. No other change was made in treatment.

On July 7th there was much less pain reported, with decreased lachrimation. He had slept throughout the previous night, for the first time in almost two weeks. The bulbus was less inflamed, and the ulceration less dense. *Rx.* *Arsen. alb.* 3x, 1 gr. every two hours.

By July 13th the photophobia was much less, pain and restlessness were gone, and he was much less irritable. Vision O. S. = 25 c.m. for fingers. *Rx.* *Arsen. alb.* 30, one pellet four times a day. The improvement was continuous. *Arsen. alb.* 200 being given twice a day from July 16th to 30th, when *sac. lac.* was given.

The ulcer not showing signs of healing in some spots, bovine was used locally on July 2d, but was discontinued on the 31st. The branching streaks of the dendritic ulceration were seen plainly at this time.

An August 6th there had been little heaviness and little photophobia for over two weeks. He was feeling very well, and had been at business for a few hours the two previous days. Left V. = 90 c.m. Restlessness and pain from 12 to 3 A. M., peevishness and irritability, dry mouth but took little water, with morning photophobia were the symptoms upon which the drug was prescribed.

CLINICAL EXPERIENCES WITH UNUSUAL REMEDIES.

R. P. RABE, M. D.

Chironian (abst. of only remedies affecting the eye, ear or throat.)

Alumen.—Chronic pharyngeal catarrh with burning constriction and dryness.

Artemisia.—Hay fever from hay.

Arundo.—Hay fever with tickling in roof of mouth and nostrils.

Badiaga.—Neuralgia worse when thinking of it. Cough with flying expectoration.

Carbolic acid.—Headache, band around head; very offensive nasal catarrh.

Codeine 3x.—Dry, hacking, irritating cough; worse lying down.

Conium.—Dry spot in throat causes cough. Impotency or too early emission. Women with ungratified sexual feelings.

Corallium.—Cold mucus in catarrh.

Elaps.—Offensive otorrhœa; greenish postnasal catarrh.

Lac caninum.—Sore throat begins on one side and goes to other. Fullness of breasts before menses. Pearly white membrane in diphtheria, alternating sides. To dry up milk supply.

Melilotus.—Headache with flushed face; nosebleed relieves.

Onosmodium.—Neurasthenia from sexual excess or eye strain.

Penthorium.—Coryza; crust and wetness in nose.

Sticta.—Cough dry, worse morning and evening. Dry clinkers in nose; chronic catarrh.

Wyethia.—Nasal catarrh, itching far back and dry, constant desire to swallow.

Sanguinaria nitrate.—Smarting and burning in throat and chest, particularly under the sternum produced by coughing. Expecterated matter is sweetish in taste, thick and yellowish in appearance. Sudden stopping of catarrh of air passages and appearance of diarrhœa calls for sanguinaria. If influenza symptoms of "winter cholera" are present consider sanguinaria, podophyllum and mercurius corrosivus. Symptoms of catarrh in genitourinary tract the result of influenza call for mercurius corrosivus, cantharis or belladonna.—*Hinsdale, in Century.*

BOOK REVIEWS.

THE OPHTHALMIC YEAR BOOK. Vol. VIII. By EDWARD JACKSON, M. D., Professor of Ophthalmology in the University of Colorado; THEODORE B. SCHNEIDMAN, M. D., Professor of Ophthalmology in the Philadelphia Polyclinic, and WILLIAM ZENTMAYER, M. D., Attending Surgeon to the Wills Eye Hospital, Philadelphia. Containing a Digest of the Literature of Ophthalmology with Index of Publications for the Year 1910. Illustrated. The Herrick Book and Stationery Company, Denver, Colo. 1911.

This is a practical digest of all or nearly all the ophthalmic literature of the year couched in an easy readable style and arranged under anatomical headings so that any subject is easily found. Throughout the text references are given by which the reader may ascertain in what periodical the entire article may be found by consulting a list in the back of the book. A very comprehensive review has been made by the authors because among the list of journals we note those of German, French, Italian, Austrian, Spanish and Cuban publication.

The book opens with an extensive bibliography, from which we are quite astonished to find the account of the useful life of Dr. Hermann Knapp omitted.

Every ophthalmologist desiring to keep up with the rapid progress of his specialty needs this book to accomplish his object.

PLASTIC AND COSMETIC SURGERY. By FREDERICK STRANGE KOLLE, M. D., Fellow of New York Academy of Medicine, Member of Deutsche Medizinische Gesellschaft. U. T., Kings County Alumni Society, Authors' Committee American Health League, Physicians' Legislature League, etc. Author of "The X-Rays: Their Production and Application," "Medico-Surgical Radiography," "Subcutaneous Hydrocarbon Protheses," etc. With One Colored Plate and Five Hundred and Twenty-Two Illustrations in Text. New York and London: D. Appleton & Company. 1911.

While certain individual cosmetic defects have been reported with methods of correcting them can be found in articles scattered promiscuously throughout general surgical and medical journals,—this is the first book, at least in English, to our knowledge, in which are ensembled the numerous operative procedures devised by surgeons of all nationalities.

For this reason it fills a long recognized surgical desideratum.

The author's twenty years' study and practice of this special field of surgery has amply fitted him to make this comprehensive collation of operations or mechanical procedures devised for the improvement of facial defects; the number and variety almost astonish one.

An interesting introductory historical sketch accredits the Latin physician, Aulus Cornelius Celsus, cotemporarius with Emperor Augustus as the originator of the principles of plastic surgery.

Clear and minute directions for antiseptis, suturing and dressing of wounds are included.

Paraffin prothesis is so widely applicable in this field that about 130 pages of the 511 have been allotted to this procedure. The twenty difficulties and dangers enumerated by Connell are considered seriatim, and minute instructions how to avoid or meet each exigency.

The only drawback in collecting such a wealth of diversified methods or operations is that it is impossible to describe each individual procedure as thoroughly as might be advantageous. Therefore as we doubt not that this edition will quickly be exhausted, may we courteously suggest that the author, when revising, consider the practicality of describing in greater detail one or two of the operations for each deformity which he has found best adapted.

The standard reputation of its publisher—the Appleton's—is fully sustained by the mechanical production of the volume.

RETINOSCOPY—or Shadow Test; in the Determination of Refraction at One Meter Distance with Plane Mirror. By JAMES THORINGTON, A. M., M. D., author of "Refraction and How to Refract," "The Ophthalmoscope and How to Use It;" Professor Diseases of the Eye in the Philadelphia Polyclinic and College of Graduates in Medicine; Ophthalmic Surgeon to the Presbyterian Hospital; Ophthalmologist to the Elwyn and Vineland Training Schools for Feeble-Minded Children. *Sixth Edition, Revised and Enlarged.* Sixty-one Illustrations, ten of which are colored. Philadelphia: P. Blakiston's Son & Co. 1012 Walnut Street. 1911. Price, \$1.00.

Thorington's "Retinoscopy" and Thorington's "Refraction" have so long been considered by ophthalmologists, standard publications on subjects treated and the previous editions have received such unqualified recommendation from this journal, as well as from all other reviewers, that little is left to say on the appearance of this, the sixth edition, except to note that by the revision and additions made this little volume is brought fully up to date. It is the quintessence of thorough instruction of the most exact of all diagnostic methods clearly explained. And we believe it will continue, as in the past, the necessary text-book on this subject for every student of the eye.

The Journal of Ophthalmology, Otology and Laryngology

Vol. XVIII

Lancaster, Pa., and New York, March, 1912

No. 3

EDITORIALETTES.

DR. MOFFAT'S VACATION.

DR. MOFFAT, as he informed us of his intention in our January issue, has gone west "to learn how to play." Judging from the quite intimate acquaintance we have enjoyed since 1900 as an editorial team, first on the Journal of Ophthalmology, Otology and Laryngology, then on the Homœopathic Eye, Ear and Throat Journal, and now on the present combination of the two, and from observing the strenuous vigor with which he executes every enterprise he undertakes,—judging from these, we believe our colleague is tackling one of the most difficult lessons he has ever undertaken.

We are glad, as also we feel assured our readers will be, that as the Journal is the doctor's fad, he will continue his editorship—in order to while away some of the possibly otherwise dreary hours of his enforced vacation.

For his Brooklyn confreres we wish to bespeak our regret upon the removal from our immediate circles of a much esteemed associate, and we believe that the city which domiciles the doctor on the completion of his vacation will obtain a worthy addition to their medical fraternity as well as an energetic upholder of the community's general welfare.

THE JOURNAL CLINIC.

Very gratifying is it that the "Journal Clinic" idea has met the approval of one of our progressive head specialists, as we are led to presume from the following paragraph of a letter received from Dr. Haseltine:

"The idea of a Journal Clinic is, I think, splendid and should be a

popular feature. The greatest difficulty will be to get enough men to contribute *steadily*. Many of us will send in something while the idea is new, but few will 'get the habit.' But when we consider how much easier it is to send a brief clinical point than to write a long paper we should all be willing to do it. If we could comment upon each other's contributions it might be interesting. A fight might result and if you can keep a healthy fight going your circulation will soon equal the Hearst papers."

The doctor's suggestions to include in the "Clinic" plan;—the opportunity to "comment upon each other's contributions" is most opportune and gratefully welcomed; therefore discussion or comment on previously appearing subjects is included in the scope of the Journal Clinic.

In conclusion the practical observations of the writer on "Clinical Indications of Temperature in Mastoiditis" is given as found on page 116 of this issue, for which contribution we wish to thank the doctor most cordially, but beg to differ with him in this respect, that we consider that the proper presentation of a subject of such importance to the patient's welfare is worthy of and needs a more extended and thorough article.

Will our readers kindly commence now to "get the habit" by mailing us some items for the Journal Clinic.

SYMPOSIUM—LABYRINTH (CONTINUED).
REPORT OF CASE OF LABYRINTH SUPPURATION.

GEO. DENMAN, M. D.,

Toledo, Ohio.

THE writer has had limited opportunities for original research upon the subject of this symposium, and feels that he could not interest you in any other way than by briefly delineating a case under recent observation.

Miss W—, æt. 27, consulted me in December, 1910, with symptoms which led me to diagnose acute mastoiditis. Scarlet fever, at age of eight, produced bilateral suppurative otitis media, and resulted in a high degree of deafness in left ear, and continued discharge from both ears for a period not accurately remembered by the patient, but at least several months.

The status of the left ear was only interrupted at intervals of several years by recurrent attacks of pain, followed by rupture, and discharge continuing for several days; and to all appearances this attack was of the same nature, but due to exposure there had been a cessation of discharge and recurrence of pain, and a resumption of poultices and other home remedies failed to bring relief.

The case to all appearances calling for prompt attention, I did, no doubt what many present would do. performed a free paracentesis, and ordered patient to hospital and prepared for an early operation, thereby making mistake No. 1, in not acquainting myself with the condition of the labyrinth.

Curettage of the cells and drainage of mastoid antrum was followed by the improvement ordinary to such a procedure, but forty-eight hours from operation it was evident that the nausea and vomiting was not alone due to the post-anæsthesia disturbance; also vertigo developed and of a very severe character. It was then the writer realized that he had not thoroughly determined the condition of his patient at first examination; and it soon occurred to him that he was to be handicapped in his efforts to establish or determine the state of the internal ear.

First: There could be no evidence of sudden deafness, for a marked degree had existed for years.

Second: Spontaneous nystagmus test was impossible, as patient was prostrated from the previous operation, as were likewise all tests of equilibrium; and I feared the caloric reaction might be influenced by the free perforation of the tympanium. However, guided by the complete direction given us repeatedly in literature by Dr. Mackenzie, and governed almost entirely by suggestions found in the production of his pen, I had little trouble in diagnosing labyrinth suppuration.

There was distinct negative caloric reaction, and decided diminished galvanic reaction, while the fork of Bezold showed total deafness, and the vertigo was so pronounced that the patient's condition was pitiable.

Compression and aspiration nystagmus were positive, the former producing pronounced horizontal to left, while upon suction it was equally pronounced to the right.

Realizing that further measures were of vital importance for preservation of the patient's life, I asked for counsel, who confirmed my diagnosis and agreed with me upon the necessity of a second operation.

Laying freely open the mastoid field, I exposed dura of posterior fossæ about seven-eighths of an inch in diameter, which disclosed, upon the prominence of the external semicircular canal, an oblong fistula.

Drainage and dressing was not as usual and plastic was omitted owing to previous operation. Wound edges were freshened and iodoform drain left in retro-auricular incision.

For two days there was increased vomiting and vertigo, and rotatory nystagmus to right when directed to fix the eyes straight ahead.

From the third day there was gradual improvement in all symptoms excepting slight facial palsy. On the fifth day no vertigo, and nystagmus much diminished, but palsy increased.

After ten days the vertigo was only present after quick movements; marked improvement in hearing; nystagmus same; palsy same.

After three weeks in hospital palsy showed much improvement, as it usually does when developing as late as the third day following operation; and patient has reported at intervals since the discharge ceased promptly; and a complete functional examination has not been made since April 1st, when there still existed a rotatory nystagmus to right when looking to right, negative caloric nystagmus and positive Rhomberg remaining, but patient's intelligence normal, and fairly comfortable.

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PROGNOSIS, TREATMENT AND INDICATIONS FOR OPERATION IN LABYRINTHINE SUPPURATION.

ROYAL S. COPELAND, A. M., M. D.,

New York City.

IN determining the prognosis and deciding upon the treatment, especially the surgical treatment, of labyrinthine disease, certain fundamentals are important:

First. If the patient have hearing power, no matter how slight may be this hearing, the cochlea is intact. In such a case the labyrinth should not be opened. There may be indications to justify a radical mastoid operation, but, in the absence of loss of hearing, the labyrinth should not be disturbed. That the deafness is absolute must be determined by most accurate examination with the forks, testing both for aerial, and for bone conduction. To be certain of the accuracy of the test some device like Barany's sound interrupter should be employed, or another method used to exclude the good ear. Much depends upon the thoroughness of this examination.

Second. So long as labyrinthine function is intact, even though deafness be present, labyrinthine surgery is contraindicated.

The natural corollary of these propositions is that labyrinthine surgical interference is justified, provided there be absolute deafness and loss of labyrinthine function. To this conclusion, however, there are exceptions, and in the absence of certain other necessary symptoms, operation is not to be advised.

To complete the indications for operation it is necessary to establish the type of the disease. At present our discussion is limited to infectious labyrinthitis and especially to Kopetzky's groups 1 and 2. These are:

- "1. Infectious labyrinthitis as sequela of acute middle ear disease.
- "2. Infectious labyrinthitis as sequela of acute exacerbation of chronic middle ear disease."

At this point I agree fully with this author and have discussed the matter with him at length. He believes that "absolute diagnosis or even probable diagnosis with the present means at our command is impossible before exploratory operation, and secondary exploratory

operation is justifiable only when the entire clinical aspect of the case is studied, and when this warns us that meningeal invasion is threatening. Until the signs of meningeal irritation supervene, that is, signs of irritability from the arachnoid membrane, we have no indication for exploration of the labyrinth." This position is endorsed by many other recent writers.

My own indications, then, for operating in acute infectious labyrinthitis are three:

1. Loss of hearing.
2. Loss of labyrinthine function.
3. Threatened meningeal involvement.

In acute cases I am opposed to the use of the caloric test, because of the dangers of damage to protecting granulation tissue and of carrying infection into the deeper structures. For this reason it may be difficult and even impossible to determine the quality of the labyrinthine function. In the last analysis, then, most dependence must be placed upon the loss of hearing, together with the evidence of meningeal irritation. Continued rise of pulse and temperature, with headache, vertigo, disturbance in equilibrium, and especially nystagmus, of any form and increasing severity, demand immediate operation.

Until meningeal symptoms develop or to avoid them, the patient should be put to bed and kept absolutely quiet for several weeks, at least two or three. There is no virtue in the patient's ability to walk about, and the sad thing about it is that almost every case of ambulatory otitic meningitis dies in three or four days: in no reported case has the patient lived more than two weeks. Remedies like *Bryonia* and possibly *Mercurius*, but more probably *Hepar sulphur* and *Silicca*, may be useful at this stage.

In cases of labyrinthine involvement following chronic middle ear disease it is difficult to lay down any hard and fast rule of procedure. Individual judgment must determine whether, in the absence of hearing, with loss of labyrinthine function, it will be best to combine the labyrinthine operation with the radical mastoid, or to do the latter only. The mastoid operation alone has been sufficient in some cases, and, should it be decided upon and performed, the patient must have the rotatory test daily thereafter until the first dressing, when the caloric test may be employed. Should these tests show increased loss of function, and should the slightest sign of meningeal irritation or general labyrinthitis appear, the labyrinth must be opened at once.

Much light may be thrown on an obscure case by making a lumbar puncture and examining the spinal fluid. Some authorities, as Ruttin, I believe, recommend this in a labyrinthine case where the radical mastoid alone is done. If there be any meningeal disturbance the fluid will be cloudy, polynuclear leukocytes will be found, and the fluid will contain bacteria.

In this connection I wish to speak of labyrinthitis of tubercular origin. This is so gradual in its onset that many characteristic signs, particularly the head noises and dizziness, are absent or overlooked. Most cases of labyrinthine fistula are of this origin. In any labyrinthine case, if there is any doubt as to whether the concomitant meningitis, or suspected meningitis, is tubercular, a lumbar puncture and examination of the spinal fluid will usually determine; at least the finding of the tubercle bacillus is diagnostic, of course. Personally, I am not disposed to recommend any form of operation in labyrinthitis when tubercular meningitis is known to be present. Alexander gives an unfavorable prognosis in tubercular labyrinthitis, saying of such a case that if it "is treated by operation the immediate result is good, but sooner or later tuberculous meningitis or cerebral tuberculosis kills the patient." If the patient already has tubercular involvement of the brain, any kind of operation, in my opinion, will simply hasten the end.

As to the particular operation to employ in labyrinthine surgery there is no unanimity of opinion, and the individual operator will follow his own ideas. Personally, I favor Richard's operation, or a modification of it, for the very convincing reasons that in my opinion it offers the greatest probability of leaving the facial nerve intact and in function, it does not expose the dura, and it produces the minimum of shock.

LABYRINTH SUPPURATION—ITS DIAGNOSIS.

GEO. W. MACKENZIE, M. D.,

Philadelphia, Pa.

SINCE having already covered the subject of this symposium in writings for the society and our official journal, I feel that what I may have to offer will to some extent be repetition, and I trust that you will accept the repetitions where they occur as an intention on my part to emphasize certain important facts. My endeavor shall be to present the subject of "Labyrinth Suppuration—Its Diagnosis" from a practical rather than a technical standpoint.

Of first importance in the diagnosis of labyrinth suppuration, as of anything else, is the history. The *history* should tell us that the patient has primarily a *middle ear suppuration*, usually of the chronic form, less frequently of the acute form, and rarely the acute form may be so acute that perforation of the membrane has not yet taken place.

It was once my fortune (good or bad) to see an attack of labyrinth suppuration with complicating fatal meningitis occur in a patient before rupture of the tympanic membrane took place, the invading micro-organism being the streptococcus mucosa.

Usually, but not invariably, the patient will give the history of prodromal attacks of *vertigo* of the rotational type. The attacks varying in duration from a few seconds to a few hours or even longer, which eventually culminates in a final attack which is coincident with the onset of the labyrinth suppuration. This final attack is most severe; in fact, it is the severest form of vertigo that can be experienced. With this vertigo the patient suffers the subjective sensation of tumbling or falling laterally to the well side which in his efforts to overcome causes him to actually tumble to the diseased side. The patient is extremely distressed, looks deathly sick, vomits frequently and retches considerably while vomiting, the very opposite to cerebral vomiting. In describing his vertigo the patient may fail to mention his subjective sensation of falling and instead refer his sensations externally, and tell you that he feels the sensation that everything externally is tumbling toward the well side.

This vertigo is so severe during the active stage of labyrinth sup-

uration that the patient cannot maintain his equilibrium while attempting to stand or walk, he is forced to lie down for safety. The vertigo persists even though the patient remains recumbent. It persists, too, when the eyes are closed and is aggravated by every movement of the head; important differential facts which help us to exclude ocular disturbances as factors in the causation of the vertigo.

The nausea, vomiting, clammy sweat, nervous excitability and collapse symptoms are merely the result of the vertigo and are of secondary importance and of no especial diagnostic value and need not be dwelt upon further.

The vertigo, extreme as it is, fortunately does not persist long. It usually abates somewhat after the first twenty-four hours and grows persistently less, so that in the course of four or five days it has diminished so much that the patient can, with caution, get up and walk about; however sudden movements of the head tend to produce momentary sensations of dizziness and unsteadiness.

Some writers are fond of mentioning the symptom tinnitus. Although tinnitus may appear in the course of any middle ear suppuration I am not of the opinion that it occurs more frequently in cases followed by labyrinth suppuration than in those which are not, excepting where the infection enters the labyrinth through the promontory, which is rather a rare occurrence. One thing is certain, after the labyrinthitis has reached the stage of suppuration, tinnitus, had it previously been present, must necessarily cease.

It has been my experience to find *headache* a prominent symptom mentioned in the history of practically all recent cases of labyrinth suppuration.

Equilibrium disturbances are alluded to in the patient's history. I have spoken of it above under the heading vertigo. In referring to his prodromal attacks of vertigo the patient will tell us that during attacks he is compelled to grasp a nearby object for support in the effort to prevent himself from falling, and, too, I have already mentioned that the patient during his heaviest final attack of vertigo must seek the recumbent position for safety. I might as well while on the subject of equilibrium disturbance refer here to a later and much milder form, but more persistent. The latter is detectable in the patient's gait by balancing tests on the Alexander-Stein goniometer, etc., which has been referred to in former writings.

The hearing, prior to the attack of suppurative labyrinthitis, may

vary somewhat, depending upon circumstances attending the middle ear suppuration, but the moment the labyrinth is involved with suppuration* hearing is abruptly and completely destroyed. Since suppuration is always a destructive type of inflammation, the parts involved must necessarily be destroyed. There can be no hearing function where the inner ear, including the cochlea, is involved in a suppurative inflammation. The difficulty lies rather in the determination of the fact which is up to the surgeon.

In the year 1907 I saw two cases of labyrinth suppuration terminate fatally because of the failure of the surgeon to recognize deafness. Both cases were operated conservatively, that is, the radical mastoid was performed but the labyrinth left unopened, and both cases died of meningitis within forty-eight hours.

There are many tests for determining deafness, which, to go into now, would carry me beyond the time limit of this paper.

From otoscopic examination we find evidence of an acute or chronic middle ear suppuration and in extremely acute cases of middle ear inflammation with intact tympanic membrane. In the last mentioned instance one is justified in incising the membrane and examining the secretion to determine the character of the bacterial infection. In many cases we find an acute exacerbation of a chronic middle ear suppuration associated with an infected cholesteatoma; however, there is no typical otoscopic finding in cases of suppuration of the labyrinth.

From the functional tests we find everything pointing to complete deafness. We may find the deafness, however, just as complete in the serous type of labyrinthitis first described by Alexander. In this latter condition there is partial restitution of function. As an important aid in differentiating the two conditions we have the symptom of headache present in the suppurative form and more or less absent in the serous.

From the examination of the nonacoustic labyrinth we find typically and invariably a rotatory nystagmus to the sound side, most intense at the onset or height of the destruction which gradually subsides but apparently never entirely disappears. This nystagmus has been called rotatory or rotary, but in fact it is not purely so. It is a mixed rotatory and horizontal nystagmus, but is *always* to the well side. I need not explain why unless an explanation is called by the discussion.

The turning tests show marked diminution of after-turning nystag-

*In this paper I have limited my theme to Diffuse Labyrinth Suppuration—Suppurative panotitis.

mus to the diseased side. The duration is reduced markedly below the normal and below that of the opposite side; it being about one-half the duration of the nystagmus to the well side, which is also reduced.

The caloric test shows negative reactibility; in other words, neither hot water, as hot as the patient can bear, nor cold water, as cold as the patient can bear, will produce the slightest effect upon the patient's existing nystagmus.

One method of applying the test which should not be forgotten is to apply cold water to the ear with the patient's head inclined laterally so that the tested ear is uppermost. In this position a positive reaction is manifested by a horizontal nystagmus upward (to the diseased ear).

I wish to repeat here that the caloric test is only a qualitative test and not a quantitative one like the turning and galvanic tests.

The caloric test can never be relatively positive or negative. It is positive so long as there is the slightest remnant of function in the canals, but when it is negative it is absolute.

With the galvanic current we find the reactions as to direction to be the same as normal, but the strength of the current necessary to produce the reaction is relatively diminished on the diseased side and increased on the opposite side. For instance, it takes a much stronger current to produce nystagmus to the diseased side with the kathode than is normally required for the opposite side.

That a reaction to the diseased side can be produced with stronger currents, 8 to 16 M. A., shows that in spite of the labyrinth suppuration the nerve is still intact. Later on, six weeks or more after the labyrinth destruction, the nerve undergoes secondary destruction, when no reaction to the kathode is possible with the strongest currents. Furthermore, in those cases where the meninges are involved through extension of the suppuration by way of the 8th nerve, we get a negative reaction to the kathode instead of a reaction as in the case of pure labyrinth suppuration.

The galvanic test has not been universally adopted because of the difficulty in making it. However, in Alexander's clinic in Vienna, where I had the privilege of introducing it in the latter part of 1907, it has been regularly followed, and in the report of cases in the literature from the Vienna Polyclinic, since that time, you will find the galvanic reactions recorded.

DISCUSSION.

BURTON HASELTINE: I would like to ask Dr. Mackenzie a question in regard to the electrical reaction in cases of diseased labyrinth.

G. W. MACKENZIE: That question was answered in the official journal of this society. The reaction to the kathode is diminished but not lost in cases of labyrinth suppuration with intact nerve; where the nerve is destroyed there is no reaction to any current that the patient can tolerate. The exact figures are in the paper.

GEO. A. SUFFA: A case sent to me by a former patient may be of interest. It was a woman of 30, pronounced to be a labyrinth case by an aurist and a neurologist, who advised decompression on the theory that the symptoms were due to cerebral pressure. These symptoms were intense vertigo with inco-ordination; the attacks of vertigo would be followed by vomiting, coming on so rapidly after the beginning of an attack that she could not get to bed before it took place. After the last attack she remained in bed for two weeks, some of the symptoms being so intense that it seemed like epilepsy. There was hyperopia, astigmia and exophoria of sixteen degrees. During the first test, when moving the card from one eye to the other (card test), she would twist her head and the vertigo would start in immediately. I prescribed three degree prisms, base in, and plus 2 D. lenses to be worn for one week. She came back alone in a week; it was the first time that she had ventured out alone for two years. The trial prisms were gradually increased to 7 degrees and turned to correct the right hyperopia that also existed. She has been wearing the lenses correcting the hyperopia combined with the prisms relaxing the exophoria and right hyperphoria for nine months with complete relief. Tinnitus was marked at first and that also was relieved. I did not hope to help this case short of operative procedures. How long the relief will last I do not know, but it has lasted up to date.

E. J. GEORGE: I have often wondered whether we are not mistaken in calling these cases hyperemia of the labyrinth where the symptoms come on so suddenly. It might be due to ischemia; considerable attention is now being paid to spasm of the peripheral arteries. I myself have seen spasm of the central artery of the retina. It is known that spasm of the cerebral arteries occurs, causing loss of speech for several hours or even days, from which the individual fully recovers; also motion of the hand or other part has been lost for a time.

In the affection called Raynaud's disease the tips of the nose and ears become blanched for a time. Why could not this be the case with the patient reported by Dr. Bellows in his paper? I think that it would be well to consider that side of the subject as well as the hyperemic side.

G. DEW. HALLET: Most of the papers and the discussion in this symposium has been devoted to the subject of suppurative labyrinthitis; I would like to report a case of syphilitic labyrinthitis. The patient was a young woman who had some years before an attack of parenchymatous keratitis in each eye. She had also an hypertrophic rhinitis, and in childhood suppuration from both ears; followed later by an adhesive catarrhal otitis. Beginning a year ago there was mani-

fested symptoms of labyrinthitis, with some vertigo and no nausea, but a progressive deafness, so that in six months hearing was entirely lost in one ear and materially reduced in the other. The patient was under treatment for inherited syphilis with deep injections of mercury. Some six weeks ago she became totally deaf in both ears. I then began to give her hypodermic injections of pilocarpine solution, 2 per cent., beginning with four minims and increasing gradually to sixteen; some improvement manifested itself immediately and continued, until after four weeks she could hear conversation. That improvement lasted only about a week. In another week she could hear only very loud sounds and the fork slightly. That is her condition now. The question comes up to me, whether I could expect any benefit from intravenous injections of salvarsan or not.

The Wasserman test was not taken partly on account of the expense, and also for the reason that marked signs of inherited syphilis was manifest in three sisters of this patient.

E. D. BROOKS: During the past winter I have had two attacks of what I judge was hyperemia of the labyrinth, with complete recovery between each attack. There was a sudden attack of slight vertigo increased by any straining, as at stool or clearing the throat. It would almost throw me off my balance, always to the right. After a time I completely recovered from that attack. Later it was followed by a second attack which also passed away. I do not know what relieved it. I am entirely free from it now. I would like to know if these symptoms correspond to labyrinth disease and what to do for it should it recur.

G. A. SHEPARD: What is the pathology of that condition which follows exposure to loud sounds, such as heavy gun fire? For three weeks after an exposure of that kind the ear showed no signs of fault except dullness of hearing to high sounds; the perception of high sounds was diminished but not lost; I have been unable to understand fully the pathology of that condition.

WM. M. MUNCY: I suggest that a paper upon that subject be called for, and some time given to the subject.

G. A. SHEPARD: I would like to ask about the pathology of the case I reported which caused paralysis of the left lower extremity; the extremity became paralyzed about the same time that the visual nerve lost its power. The data of the case is very meagre because the patient was so ignorant that data could not be obtained.

H. P. BELLOWS: It is generally acknowledged that hyperemia of the labyrinth cannot be distinguished from anemia so far as the symptoms of the labyrinth itself are concerned. It is the associated symptoms that determine which it is. The general congestion of blood to the head in the case I reported as shown by the feeling as if the head was between the knees would argue for an undue afflux of blood to the labyrinth.

G. W. MACKENZIE: First, I want to thank the members who have

responded to the solicitation of the chairman with papers and thus contributed towards the success of the symposium, also I wish to thank those who have discussed the subject, and I am sure that the symposium has been a success.

It should be our effort to put out papers that are thoroughly scientific, as papers which are not so get us in bad with our competing sister societies who are sure to criticise them. We want to give our very best. There are several papers here whose authors are not present, and any criticism I may make is only in an entirely friendly manner.

PRESIDENT: The Press Committee will see to it that all discussion on the papers of absent authors is sent to them to read and to reply to if any so desire.

G. W. MACKENZIE: I have a paper in the Transactions of 1909 of this society in which I laid considerable stress upon the position and exact location of the canals; it is very important to know the exact position as their function depends upon such position.*

It was originally thought that fish had the sense of hearing from the anatomical features of their auricular apparatus. They do have the sacculus and the utricle. As the result of a good many experiments, however, it has since been proved that hearing proper is absent. They will respond to vibrations or wave impulses such as tapping on the side of the tank that contains them. But to pure sounds, without the mechanical vibration, they do not respond. Kreidl and Brewer made experiments in this line by ringing a bell without the chance of other vibrations. Fish do not have a developed cochlea.

I was particularly pleased with Dr. Shepard's paper, but I would suggest that when we have a sequestrum of bone with a rising temperature it is time for surgical interference. As to Dr. Bellows' paper, I am inclined to accept the theory offered by Dr. George; in fact, Dr. George has taken away my ammunition. Cases of sudden, temporary vertigo, especially in patients past middle life, are more apt to be due to spasm of the arteries rather than to the opposite condition. In such cases arterial sclerosis is apt to be present, although it may not be perceptible to the finger on the pulse. It is a diagnostic procedure to put them in the prone position and notice the changes in symptoms that occur; hyperemia is increased in the recumbent posture whereas the anemia is apt to be relieved. The condition may be compared to spasm of the central artery of the retina or of any of its branches.

I think that two gentlemen brought up the question of blowing of the nose; blowing through the mouth rapidly brings on a condition of cerebral anemia, a fact pointed out by MacEwen. The circulation in the sinuses of the brain is synchronous with the respiration rather than with the heart; vertigoes brought on by blowing are due to the

*Also in *The Homœopathic Eye, Ear and Throat Journal*, March, 1909.

effect of that act upon the brain. I was much interested to hear one doctor speak of horizontal nystagmus with exophoria. In cases of paresis of the eye muscle, if the patient attempts to look in the direction of the paretic muscles he will frequently have nystagmus, and this is all the more apt to happen during the space of improvement.

The case that Dr. Denman reports in his paper is interesting; there are only two points that I wish to refer to. In the history of the case it is noted that there was a cessation of the discharge with aggravation of the pain. Sudden cessation of an aural discharge with increase of the general symptoms is always bad and indicates a complication; the pus has probably formed an opening and exit somewhere else. The other point is that the case with a questionable diagnosis (probably labyrinth suppuration) was operated upon conservatively at the beginning, necessitating a second operation. I congratulate the doctor upon his candor in reporting the case so impartially.

Dr. Hunt on the second page of her paper refers to the caloric test as being normal and again as being weakened. Since the caloric test is a qualitative one only, we cannot speak of it in quantitative terms as we do of the turning or galvanic tests. On page 9 in referring to the canals irritated by turning, the sentence on the 5th line reads:

"If the head is inclined 90 degrees to the shoulder, the posterior vertical pair functionate and nystagmus will be vertical." The following sentence reads: "If the head is inclined 90 degrees forward or backward, the anterior vertical pair of canals functionate, causing a rotatory nystagmus." If the doctor will refer to any of the standard works of anatomy she will see that the superior canals do not lie in the transverse plane nor do the vertical canals lie in the sagittal plane of the head. Furthermore, the two superior canals do not act together nor do the two posteriors. The fact is that the superior canal on one side lies in a plane with the posterior canal of the opposite side.

As to the anatomical location of the canals I refer the doctor to the specimen (base of skull with semicircular canals exposed) and to a reprint of a paper on the anatomy of the canals, where I had laid special stress on these very points.*

On page 9 we read, "if one side of the labyrinth is diseased, that is, if we have a pathological, irritative condition and the patient is turned so that the diseased ear is stimulated, the duration of the nystagmus is about half as long as that produced by the stimulation of the well ear." I beg to differ, for the opposite condition is true; the after nystagmus is increased to the diseased side in case of pathologic irritation and diminished to the diseased side in cases of destruction.

In upper part of page 10 appears the sentence: "If we irrigate the same ear with cold water (78° F.), head erect, we produce a horizontal and rotatory nystagmus to opposite side." Most writers have termed

*Homœopathic Eye, Ear and Throat Journal, March, 1909.

it a rotatory nystagmus, when, in fact, there is an element of lateral motion, which a purely rotatory nystagmus should not have. I therefore agree with the doctor in terming the nystagmus horizontal and rotatory.

The final paragraph page 19 reads: "The sudden appearance of facial paralysis is given by Kopetsky as one of the symptoms in involvement of the labyrinth during acute suppuration of the diseased middle ear and mastoid."

I do not agree with Kopetsky on this point from the fact that anatomically the facial nerve has its own separate canal, and nowhere does it enter the labyrinth capsule; furthermore, from the clinical standpoint, we find in the majority of seventh nerve paralyses that the labyrinth is unaffected, and, too, in the majority of cases of labyrinth suppuration, the seventh nerve is not affected. There can occur, however, a sequestration of the inner ear and canal of the seventh nerve in cases of mastoiditis where the suppuration follows the cells in the petrous bone surrounding these structures. This condition is predisposed in those cases where the inner ear and nerve are surrounded by pneumatic cells instead of spongy bone.

I like the tone of caution in Dean Copeland's paper. I have sounded the same cautions in a paper on the prognosis and treatment wherein was criticised the radical tendency of Jansen, of Berlin. At the same time we can be overcautious. I do not agree with Dr. Copeland in regard to the mastoid operation alone as being sufficient in some cases with absence of hearing and loss of labyrinth function. If we decide to operate at all in these cases it is better to include with the operation opening of the labyrinth, for the reason that the trauma of mastoid operation is too prone to cause the spread of the infection from the labyrinth to the intracranial structures. This is the opinion also of the Vienna School, based upon some early sad experiences. Somewhere else I have referred to this point. The only two cases of labyrinth suppuration in Politzer's clinic which resulted fatally prior to August, 1907, were cases where the mastoid operation alone had been done and the labyrinth operation left undone.

Next let me briefly refer to Kopetsky's work on the surgery of the ear, the same author to whom Dean Copeland has referred. First of all, I consider his chapter on surgery of the labyrinth to be antiquated, inaccurate, inconsistent and as containing advice which it is unsafe to follow.

It is antiquated from the fact that it contains nothing referring to the more accurate methods of diagnosis of labyrinth suppuration.

It is inaccurate in more ways than I have time at present to show; however, one glaring instance will suffice. On page 183 in describing the semicircular canals, he says, "the posterior and the superior canals present their ampullæ at the conjoined extremities."

He is inconsistent when, on page 186, under the heading, "Indications for the Surgical Opening of the Labyrinth," he tells us: "When

a purulent process is present in the labyrinth surgery offers the only rational treatment to combat its advance," and follows this with the clause quoted in Dr. Copeland's paper, page 2: "Absolute diagnosis or even probable diagnosis with the present means at our command is impossible before exploratory operation," etc. If we are to open the labyrinth when there is a purulent process in it and later told that we have no means of telling it beforehand, what is left for us to do?

Then again on page 189, in summing up the indications for the operation of opening up the labyrinth, he tells, among other things, in paragraph marked 1, "when, prior to the operation, total deafness is present in the affected ear or when symptoms either of labyrinthine irritability," etc., and again in paragraph 2, "when at the time of performing the radical mastoid operation, etc., grave symptoms of labyrinthine irritation are present which do not promptly subside after the performance of the radical mastoid operation." In the first paragraph he uses the word irritability, in the second paragraph he uses the word irritation without in either instance telling us what is meant or how we are to recognize the condition. Without playing on words, when a labyrinth is irritable or in a state of irritation, it is not destroyed and should not be opened, and in this I am supported by the ablest diagnosticians. If we were to open labyrinths because they are irritable or in a state of irritation and are left to guess what irritable means, there would be very many undue sacrifices.

Such advice as given in Kopetsky's book I consider unsafe to follow. I wish to support Dr. Copeland's contention for the lumbar puncture. It was a rule with Alexander as far back as 1907 to do lumbar puncture in all cases of labyrinth suppuration with even the slightest degree of headache or other intracranial symptoms.

Dr. Copeland made the following remarks preliminary to reading his paper:

R. S. COPELAND: I should hesitate to read this paper at all if you had not decided that members might appear twice on the program. I take it that the purpose of a paper is either to give information or to so present a subject that its discussion will be general; if the latter method be chosen, points of value are brought out and information thus given indirectly. I have been warned by the worthy chairman of the symposium that he will not only discuss my paper, but that he will "annihilate" it; you should pay particular attention to what I have to say, not because it is of any value in itself, but merely that you may appreciate the annihilation which it is about to suffer. The chairman promised that he would first submit to me his "annihilation," but I failed to receive it.

We are doing pioneer work in this line; the data already gathered, the facts already known about it, and the few cases that have been reported and studied give us little right to draw final and definite conclusions upon the subject, or to venture to say the final word in criticism. I had hoped that some of the papers read by title would be read

in full so as to give a proper introduction to my paper on treatment. The point of difference between the chairman and myself, as I understand it, lies in my reference in terms of kindness and affection to Kopetzky and approval of his work. He says he will show you that Kopetzky is absolutely wrong and not to be trusted as an authority at all. I know enough about that gentleman to assure you that if he were here in person he would not be "annihilated," although, of course, with so able an opponent he might come out second best.

Tonsillitis, Chronic Urethritis and Chronic Ureteritis Caused by.—

The author studied the relationship between tonsillitis and certain cases of chronic urethritis and chronic ureteritis for eighteen months before presenting his views. In the cases cited the relationship seems to be so intimate, and the evidence so conclusive, that it bids fair to solve the mystery surrounding those cases of persistent urethritis where the patient has an intact hymen, with morals beyond question. In the treatment of certain cases over a long period of time, the author noticed that the patients would frequently return and complain of a sore throat immediately following an application of silver nitrate to the urethra. The intimate relationship between the two parts appeared especially marked in one patient, who stated that irritation of the throat and the urethra was pronounced during damp weather. Examination of the throat showed diseased tonsils, the removal of which, as in the other cases, brought relief of the symptoms. Although the cases presented (four in number) are too few and of too recent occurrence to serve as a basis for reliable conclusions, the author feels that the evidence set forth is sufficient to warrant a more careful study of all cases of chronic urethritis, and to arouse the suspicion that diseased tonsils may be the etiological factors.—*G. L. Hunner, Journal of the American Medical Association, April 1, 1911.*

SOCIETIES.

AMERICAN HOMŒOPATHIC OPHTHALMOLOGICAL, OTOLOGICAL AND LARYNGOLOGICAL SOCIETY.

President's Letter.

Dear Member of the Am. Hom. O., O. and L. Society:

I am making a final appeal to the members of our society for papers for the meeting next June. If you have anything to offer which you think would be of especial interest please send us your title *at once* and your paper before the first of April as required by the by-laws.

So far as possible we wish to arrange papers under one of the three groups, namely: (1) Preventive Medicine or Surgery; (2) Glaucoma; (3) Reported Cases. But it is not inferred that papers which do not conform to this arrangement are not acceptable.

We have very few papers promised as yet, so let the response be generous.

With best wishes for your health and continued usefulness in the community you serve,

Yours fraternally,

G. A. SUFFA, *President.*

Secretary's Letter.

Dear Doctor:

The next annual meeting of the American Homœopathic O., O. and L. Society will be held at Pittsburgh, Pa., the week of June 17th to 22d. I am enclosing herewith a letter from President Suffa asking for contributions for our next program. You will note the plan he has outlined, and should you wish to take part in any symposium mentioned please state your subject as concisely as possible.

If, however, you wish to present something entirely different from any of these, please let me have your title at once. I must have a synopsis of your paper also not later than April 1st.

I trust each man receiving this letter will consider it as personal and that I may have a generous and prompt response, so that our program may be gotten into shape at an early date.

Please send me your title at once.

Very sincerely yours,

DEAN W. MYERS, *Secretary.*

AMERICAN LARYNGOLOGICAL ASSOCIATION.

(Continued from p. 73.)

(Abstracts of some papers from *Medical Record*.)*Second Day.*

NASOPHARYNGEAL FIBROMY.—Dr. D. Bryson Delavan, of New York, called attention to the fact that, from time immemorial until about thirty years ago, the removal of these peculiar growths had been effected through the performance of some severe and not infrequently fatal preliminary operation by which access was obtained to the effected part. Voltolini, of Breslau, and Rufus P. Lincoln, of New York, had substituted the total amount of growth, through the natural passages, by means of the galvanocaustic loop, thereby entirely obviating the danger of severe hemorrhage. Any remaining fragments could be eradicated by the galvano-cautery. Where a growth was too large to admit of the use of the galvanocaustic loop its volume was first reduced by means of electrolysis or by ignipuncture. Both the unipolar and the bipolar methods of electrolysis were employed, the latter however being preferred. In many cases applications made in this way as near as possible to the base of the growth caused the occlusion of so many of its nutrient vessels that the volume of the tumor was decreased sufficiently to make the use of the incandescent loop practicable. Up to ten years ago a considerable number of successful cases had been reported as cured by this method. During the past ten years it had fallen more or less into disuse, although the statistics which the writer of the paper had taken pains to collect amply proved its vast superiority in point of safety and of efficiency over all other means of treatment. The fact that so many of the leading surgeons of the day gave preference to radical operation made it desirable that the subject should be carefully reviewed; even when the growths were removed through the natural passages by means other than electrical, such as by tearing away of the tumor piecemeal, or its removal by means of the cold wire snare, accidents were common and hemorrhage was almost invariable. In fifteen reported cases treated by electrical methods no cases of hemorrhage, shock, or death were reported, while ten cases were reported as cured, and one improved, the others not having been heard from. As against this through the use of the cold wire snare in ten cases there were reported nine instances of severe hemorrhage and no cases of

cure. Of forty-six cases operated upon by severe preliminary operation or by removal piecemeal with the forceps, one death was reported and only five cures. These statistics, covering a period represented by the last ten years, about coincided with those obtained by the writer from the twenty years preceding. They amply sustained the supposition that radical preliminary operation for the removal of fibroma of the nasopharynx was unjustifiable; that all of the necessities of the case could be met by means of the employment of electrical methods applied through the natural passages without any preliminary operation whatsoever; that they could be met by those means without risk to the patient and without resulting deformity, and that the percentage of success through their employment was vastly in excess of that by other means.

Dr. Holmes, of Cincinnati, called attention to the use of the mercury points, either by the unipolar or bipolar method; he stated that with the unipolar 500 to 700 milliamperes and by the bipolar up to 2,500 milliamperes could be used. He referred to a case of spindle-cell sarcoma involving the tonsil and upper posterior part of the tongue in which he successfully removed the growth; also to a case with involvement of the soft and hard palate; both patients were without recurrences today one being of eight and the other of three years' duration.

Dr. Harmon Smith, of New York, briefly mentioned three cases of postnasal fibroma including the entire posterior nares reduced by the injection of monochloroacetic acid; there were no recurrences.

CASE OF SPINDLE-CELL SARCOMA OF THE LARYNX TREATED BY ELECTROCAUTERY OPERATIONS AND THE APPLICATION OF RADIUM.—Dr. J. Price Brown, of Toronto, reported the case of a young man of 22 suffering from a rapidly growing tumor in the larynx. Previous to two months before Dr. Brown saw him he had been in excellent health, with no throat symptoms whatever; then for several weeks there was gradually increasing stenosis until the point of suffocation seemed impending. On examination a large, corrugated, dark red growth could be seen through the throat, nearly filling the larynx; it was like a large strawberry, seemed to be very widely sessile in attachment, and was located more to the left than to the right side. The glands of the neck on the same side immediately adjacent to the growth were large and somewhat tender. The voice was not much affected. Owing to the size of the tumor and the involvement of the glands of the neck the case did not seem suitable for radical external operation. Accordingly

under cocain and adrenalin anesthesia the speaker commenced electrocautery operations, first to be able to remove a large segment for microscopical examination, and then for removal of the growth. After several sittings he secured a piece about the size of a marble of solid tissue, removing it by snare for histological examination. Dr. Archibald examined it carefully and pronounced it to be undoubtedly rapid growing spindle-cell sarcoma, occurring in a very unusual situation. Having been able to remove so much by aid of the electrocautery knife, the speaker continued the electrocautery operations daily, the blade being at a white heat. In about three weeks the large bulk of the growth had been removed and the speaker concluded to try the effect of the application of radium at the base. Accordingly Dr. Ryerson, of Toronto, substituted for one week radium application in place of electrocautery operations. The pain seemed to be lessened by the application of the radium; but during the week of its use the growth of the tumor was enormous and the glands increased in size. The larynx was full again, although the new growth was lighter in color and softer. So the use of radium was stopped and a return to electrocautery operations was adopted. For a while the operations were daily; then as the tumor decreased in size they were made on alternate days. At the time of reading the paper the growth had almost entirely disappeared, although certain points still required treatment. When the man first came for operation his weight was 130 pounds; two months later, after many cauterizations, he weighed 124 pounds. One month later, at the time of reading of the paper, it had increased to 139 pounds. The glandular enlargement had disappeared, the larynx was quite open, and the patient was taking his meals regularly with the family at the table. During the early part of the treatment he was fed solely on milk, which he could always swallow well, although it pained his ears while drinking. At no time his food or drink got into his larynx. During all the early operations there was always profuse bleeding, but later there was little or none.

Dr. Mackenzie, of Baltimore, said that the use of radium in cavities more or less inaccessible, that is, where the operator could not watch the agent every instant during application, was to be deprecated, and that no less an authority than Wickham, of Paris, had said that under no circumstances should this agent be used in the deep throat cavities, in the larynx, or deep parts of the larynx. The speaker considered that the x-rays had proven quite successful in the pharynx.

ESOPHAGOSCOPY AND BRONSCHOSCOPY BY THE KILLIAN METHOD.—Dr. Thomas Hubbard, of Toledo, reported a series of operations for removal of foreign bodies from the œsophagus and the bronchi. (1) Boy aged 4. One cent piece in œsophagus one month, complicated by stricture due to lye swallowed when two years of age. (2, 3.) A group of coin and button cases were briefly referred to. Two cases having fragments of bone impacted in œsophagus each five days, operated on by local anesthesia. One fatal case of impacted bone in œsophagus one week; death due to pneumonia. (4) Girl aged 3 having a large open safety pin in œsophagus. Details of method of turning the pin on the embedded point based on measurements of radiograph to determine the safety of this method. For instance, in the case detailed, the process of turning the pin by traction on the shield by means of a hook stretched the œsophagus only one-quarter of an inch more than it was as shown in the radiograph. This was done and no traumatism resulted. A snare was exhibited by means of which an open pin could be closed *in situ*. (5) Brass Christmas tree candle holder removed from the œsophagus of an infant of eight months. (6) A series of radiographs of a case having an upholsterer's tack in left lung for eight years were exhibited, showing disappearance of the shaft and changes in the lungs. (7) Brass ferrule with rubber eraser in one end and a steel pen in the other, removed from the right bronchus. (8) Steel glass-headed pin removed from the left lower lobe bronchus of an infant after one week. (9) Screw bolt removed from right lower lobe bronchus of an infant after five days. (10) Fragment of cement tooth filling, removed from the lower lobe, right lung of a woman, seven months after aspiration. During extraction of teeth this fragment snapped into the trachea. An abscess cavity formed and the fragment was located below the ninth rib near the spinal column and extracted through the Killian tube. A group of cases having kernels of corn, seeds, nutshell fragments, peanuts, etc., operated on in part by the Killian method, were briefly referred to.

Dr. Makuen, of Philadelphia, referred to a case in which he met with a rather unusual difficulty. In attempting to remove a safety pin by means of the ring instrument, the glottis, sphincter-like, grasped and held the instrument so tightly that it was impossible to extricate it; finally, the pin was pulled through the bronchoscope, but fell on the floor before the operator had an opportunity to see how it had been held in the ring.

Dr. Jackson, of Pittsburgh, considered Dr. Makuen's case a unique one. With regard to esophagoscopy and bronchoscopy he considered it required a great deal of ingenuity and the ability to meet emergencies for these procedures to be safe. He said that in his opinion the removal of an open safety pin was extremely dangerous, and that he considered it a better method to push such a pin down into the stomach, turn it around, and then pull it out, rather than to try to turn it around in an already stretched esophagus. He also mentioned the frequent dyspnœa in esophageal cases produced by the depression of the trachea during an attempt to remove a foreign body from the esophagus; this was frequently apt to end fatally. He laid great stress on the fatal nature of the peanut, stating that in his opinion it was the most serious of all foreign bodies becoming lodged in the bronchi, referring to three personal cases of great interest.

Dr. Mayer, of New York, stated that he believed the bronchoscope would soon come to fill a rather different field than that used for it today, namely, the ability by its use in the hands of skilled bronchoscopists of ascertaining the presence of new growths and other conditions in the air passages.

ARE TONSILS A MENACE OR A PROTECTION?—Dr. Henry L. Swain, of New Haven, discussed the question as answered, first, in the practice of throat surgeons all over the country. As they almost universally were adopting the operation of tonsillectomy whenever they attacked the tonsils, the inference was that the latter were surely of account and always a menace. Answering the question from the anatomical and physiological standpoint, the evidence adduced was such that it could be readily proved that the tonsil was to all intents and purposes a lymphnode and was of just as much importance, no more, no less, as any other node. He called attention to the fact that the tonsils (faucial) had lymphatic trunks leading into them, which drained from the nose and palate, so they had a very definite office in caring for this lymph, a very different viewpoint from the usual one of being a mere retentive area for matter soaking into them from the mouth. Being thus, when in health, an active agent of protection to the system, the tonsil must, like the whole lymphatic system, be of relatively greater importance to the very young child than to the adult. These two facts were strengthened by the additional observation that as the healthy normal individual always had such tissue, which began to functionate early in life in the adenoid tissue in the nasopharynx, in

the faucial tonsils in childhood, and in the lingual tonsil in later adult life, it would seem absolutely proved that the body required some such physiological action of some such tissue for its proper development or in its economy, *i. e.*, a definite function for lymphoid tissue. Taking this as true, it would be absolutely illogical to remove any of it except for just cause, and this led Dr. Swain to deplore tonsillectomy, complete removal of the tonsils, as an indiscriminate routine procedure in young children, especially when this was accompanied by complete adenoidectomy. The adenoidectomy was to be commended—too thorough an operation was rarely possible—but in early childhood a portion of the healthy faucial tonsil tissue could be well allowed to remain. The system might have need of it. When diseased any of the good operations for tonsillectomy could be used, but he felt that the teaching should be that, even in adults, there were other methods of bringing about a satisfactory and safe condition of the tonsils. These latter he almost universally employed by preference and such patients had, at least, the benefit of whatever protection the saved tissue could be to them.

Dr. George B. Wood, of Philadelphia, objected to the views held by the essayist, and stated that by repeated experiment he had been able to prove that the lymph flow in the tonsil was an efferent current. If a tubercle bacillus is placed in a crypt of the tonsil it will produce tuberculosis of the tonsil; at almost the same time tuberculosis will start in the lymphnode draining that tonsil. He did not believe it to be possible to tell macroscopically a diseased tonsil. He regarded the function of the tonsil to be primarily concerned with the production and elimination of lymphocytes. He advocated in all diseased conditions the complete removal of the tonsil, having obtained far better results from this procedure than from tonsillotomy.

Dr. J. G. Wilson, of Chicago, agreed with Dr. Swain that the physiological activity of the tonsil was principally confined to fetal and infant life, but did not consider it as a pure lymphatic gland. He called attention to the fact that in its development as an ingrowth through the second branchial cleft it differed from other lymphnodes, which developed as a breaking up of the lymphatic cords. He said that the rat was the only animal he had found in a study of the comparative anatomy of the tonsil which did not possess this organ.

Dr. W. E. Casselberry, of Chicago, said he had never seen a particle of detriment to either the child or adult resulting from the total ex-

cision of the tonsil, but explained this on the basis that there were supplementary tissues to continue its function. He agreed with the essayist that during childhood the tonsils should never be removed unless definitely diseased, but advocated their absolute removal if operated upon at all.

Dr. Mackenzie, of Baltimore, emphatically voiced his disapproval of the indiscriminate removal of tonsils so largely practiced at the present time, and considered it the duty of every laryngologist to make the conditions warranting tonsillectomy plain to the general practitioner.

Dr. Coakley, of New York, called attention to the fact, also referred to by Dr. Swain, that the tonsils in children and in adults were entirely different in function; in adult life it was classed more as a pathological than as a physiological organ. He mentioned the fact that frequently in adults with rheumatic diathesis the removal of the tonsil which had caused quinsy, etc., would show an abeyance of these peculiar manifestations. It was his opinion that tonsils should be enucleated and not cut off, and his experience had been that the children in whom this procedure had been carried out because of disease of the tonsils as a general rule became markedly improved in health following the operation.

Dr. Coolidge, of Boston, discussed the etiology of acute tonsillitis, referring to the recent epidemic in Boston, which was at first traced to the milk supply, but later became general throughout the city. He considered in view of the mode of onset that the condition in the tonsil pointed rather to an efferent than to an afferent flow of the septic microorganisms or their toxins.

Dr. Coffin, of New York, called attention to the frequency with which tonsils which macroscopically appeared unaffected were found microscopically to be diseased. He considered the most dangerous of all tonsils to be those stumps remaining after a tonsillotomy and urged the total excision of the tonsil.

Dr. B. R. Shurly, of Detroit, deprecated the removal of tonsils unless proved to be diseased. In many hundreds of tonsillectomies he had seen nothing but favorable results. He believed children whose tonsils had been removed were less liable to the various throat complications if they became the victims of the infectious diseases of childhood.

Dr. Bliss, of Philadelphia, also considered the stumps of tonsils

remaining after partial removal to be a great menace to the health of the individual. He made a plea for the school children now being sent to the various dispensaries for treatment, urging that wherever indicated the tonsils should be removed, but where there was no absolute indication for this procedure that the laryngologist should refuse to consider operation.

HOMŒOPATHIC MATERIA MEDICA AND THERAPEUTICS.

SANTAL (Midy); SOME SYMPTOMS.

PROVING BY H. C. MORROW, M. D.,
Austin, Texas.

Inhalation. A patient who had been taking capsules of Santal (Midy) left me at my request a few for investigation. In trying to open one of them, a few drops came in contact with my fingers, and immediately its fumes permeated the whole atmosphere of the room. Soon after, a lady patient came in, and to this fortuitous circumstance we owe the following proving:

* * * * *

Eyes.—Sensation of a splinter sticking in left eyeball, midway between pupil and inner canthus. Eyes burn and feel full, as if they would burst. Eyes and face burn. Figures run together when making a calculation; letters run together when reading.

Ears.—Ears red and feel swollen. Feels like a big lump behind each ear.

Nose. Tickling-prickling on outer part of nose. Nose itches inside. Frequent sneezing with watery coryza and lachrymation.—*N. A. J. H.*

EYE REMEDIES.

Platina.—Objects look smaller than they are. Eyes feel cold. Twitching of lids. Cramplike pain in orbits.

Ranunculus Bulbosus.—Day-blindness (hemeralopia, miscalled nyctalopia;) mist before eyes; pressure and smarting in eyes, as from smoke. Pain over right eye; better, standing and walking. Vesicles on cornea with intense pain, photophobia and lachrimation. Corneal herpes.

Saponaria.—Hot stitches deep in eyeball. Ciliary neuralgia; worse, left side. Photophobia. Increased intraocular pressure. Exophthalmos, worse reading or writing.

Sarracenia Purpurea.—Photophobia. Eyes feel swollen and sore. Pain in orbits. Black objects move with the eye.

Solanum Nigrum.—Pain over both eyes. Alternate dilatation and contraction of pupils; weak sight; floating spots.

Tabacum.—Dim sight, sees as through a veil; strabismus, muscæ volitantes. "Amaurosis."

Theridion.—Luminous vibrations before eyes; sensitive to light. Pressure behind eyeballs. Throbbing over left eye.

Tilia Europæa.—Sensation as of gauze before the eyes. Binocular vision imperfect. Of value in muscular weakness of the eyes.

Titanium.—Vertical hemianopsia: half an object only could be seen at once.

Trillium Pendulum.—Vision blurred; everything looks bluish. Eyeballs feel too large.

Upas Tiente. Pain in eyes and orbits, with conjunctivitis. Dull sunken eyes. Stytes.

Uranium Nitricum.—Lids inflamed and agglutinated. Stytes.

Usnea Barbata.—Eyes feel as if they would burst out of their sockets.

Ustilago Maydis.—Aching in eyeballs, with much lacrimation.

Vespa Crabro.—Chemosis of conjunctiva. Erysipelatous inflammation of lids.

Viburnum Opulus.—Sore feeling in eyeballs.

Viola Odorata.—Heaviness of lids. Eyeball feels compressed. Flames before eyes. Illusions of vision; fiery serpentine circles. Choroiditis. Myopia.

Viscum Album.—Double vision. Blue rings around eyes.

Xerophyllum.—Eyes painful as from sand, smart; difficult to focus for close work.

It is hoped that careful reports will be made of clinical verifications of any of these symptoms, giving the other symptoms of the patient for individualization. Particular pains should be taken to report each case in such manner that the reader will agree as to the diagnosis and be convinced that the relief is justifiably credited to the medicine; all changes in the patient's mode of living and all adjuvant treatment should be given, also the promptness and the permanence of relief. In other words, the report of a clinical cure should always be a demonstration not merely an assertion, in order to mark it of scientific value.
—*Hahnemannian Monthly*.

JOURNAL CLINIC.

Temperature and mastoid tenderness are treacherous guides in managing middle ear or sinus infections. I have just had a case of cavernous thrombosis with all its pitiful consequences because the temperature was low and tenderness was absent during two weeks of mastoid infection and the physician in charge was trying to decide between typhoid and pneumonia.

When we teach that normal temperature means nothing when dealing with bony sinuses and that in adults tenderness is a *late* symptom fewer people will die while waiting for a diagnosis.

DR. B. HASELTINE.

Eustachian Catheter.—Before attempting to pass always examine the nasal fossæ to ascertain whether there are any obstructions present which would render the procedure painful, difficult or impossible and be guided accordingly.

After the catheter has passed into the postnasal space (and before turning it toward the ear) always blow through it with the Politzer bag in order to free the beak of the catheter from any mucus that may have adhered to it during its passage through the naris, which might otherwise be carried into the Eustachian tube with possible resulting infection.

DR. G. W. McDOWELL.

Rhinologists, we think, not infrequently are apt to overlook the obstructions to nasal breathing caused by the malposition of the soft tissues forming the nostrils, *e. g.*, dislocation or twisting of the internal wing of the cartilage of the ala, relaxed or collapse of the ala, fracture and dislocation of the anterior nasal spine, etc.; because of our habit of hastily introducing the nasal speculum before observing the natural contour of these external parts; in so doing we, of course, press these soft parts aside thereby temporarily removing the obstruction, in reality making the actual condition and deceiving ourselves.

The *Nasal Douche* is very generally considered a dangerous procedure particularly decried by the aurist; as ordinarily used by the patient, and, we regret, frequently recommended by the physician, we recognize that it is. Is it the douche or the technique of application? From observation on patients and personal experience we find that a

spray is not adequate to clean such viscid mucus as collects in the nares and pharynx. Also we are coming to recognize that nasal and nasopharyngeal catarrhs have their origin in the upper regions of the nose—the accessory sinuses. As the Eustachian tube orifice is on the level of the nasal floor, only a quarter inch from the inferior turbinal—a jet of fluid directed thru the inferior meatus, we appreciate, is prone to affect the ear. A fountain syringe may be harmful because the reservoir may be placed too high thereby causing too great pressure. The glass duck or boat douche is little more than a toy, only cleansing the inferior meatus about one-third the desired extent and impinging the fluid onto the Eustachian. From the above we conclude that old ordinary ear and pus syringe the best—the beak should be pointed or the jet directed *up the nose*, the direction in which the laity thinks the cavity extends—really toward the middle turbinal. In this manner only can the viscid mucus be flushed from off the orifices of the accessory sinuses. The original impact comes on the upper nares, washing downward and backward, cleansing the nasal floor and naso-pharynx, flowing over and not impinging onto the Eustachian orifice.

ABSTRACTS.

Ehrlich-Hata 606 in Ophthalmology.—A review is given of the methods of using 606, with the results of various authorities, and especially what has been done in the domain of ophthalmology. He attributes the small percentage of ophthalmic cases to be due to caution on account of some of the horrible results of other arsenical compounds, especially atoxyl. Among the cases which he has collected up to date on which 606 has been used are the following:

1. Four cases by Neisser. (a) Brain lues, six months after infection, with choked disk, eye muscle paralysis and severe headaches; which was relieved completely and rapidly of all symptoms after injection of 0.2 of 606, when K. I. and Hg. had had no effect. (b) Three cases of interstitial keratitis without results.

2. Six cases by Wechsellmann. (a) Optic neuritis, which had resisted the influence of Hg., rapidly cured with 606, with normal vision restored. (b) Five other cases with abnormal optic nerve without 606 producing any harmful results.

3. Two cases by Treupel. (a) Syphilitic keratouveitis with positive Wassermann; cured eight weeks after injection of 606. Three months later returned, with slow healing after a second injection. (b) Paralysis of the left side, with ptosis and paresis of left internal and external recti following apoplectic attack. Showed rapid improvement after injection of 0.3 of 606 with slight paresis of recti and slight ptosis remaining.

4. Four cases of Gluck. (a) Interstitial keratitis which had been under treatment for one year with Hg., showed rapid clearing immediately, but three weeks later were still hazy. (b) Very severe iritis with synechia. Photophobia disappeared two days after injection of 0.4 of 606 with complete cure in four days, with the exception of the synechia, which had disappeared eight days later under atropin. (c) Double iritis cured three weeks after injection. (d) Optic atrophy. No result.

5. Dorr. One case of diplopia cured in three weeks.

6. Two cases by Hoffman. (a) Exophthalmos and abducens paralysis in hereditary syphilis rapidly cured after injection of 606. (b) Tertiary iridocyclitis and hyalitis. No results given after the treatment.

7. One case by Igersheimer. Interstitial keratitis, negative results.

8. Ehrlich. Excellent results in retinitis syphilitica and iritisgummosa.

9. Axenfeld. Rapid recovery in a case of irisgumma. He deprecated the fact that ophthalmologists have not been giving 606 for a special trial in eye cases, and also that the preparation is not yet on the market. He states that Ehrlich is still working to improve the prepara-

tion, and has already discovered "Hyperidial," which is called Hy. for short. Its poisonous effect is said to be one-third that of 606—*Dr. Stucep, Annals of Ophthalmol. (bst., Hah. Mo.)*

Ozena, Contribution to the Question of.—From an analysis of the literature of ozena, including the etiology, histology, bacteriology and symptomatology of the disease, and from their own observations in 138 cases of ozena and 22 cases of purulent rhinitis, the authors conclude that: 1. No clear line of demarcation can be drawn between chronic purulent rhinitis and ozena. 2. Chronic purulent rhinitis (ozena) usually begins early in life as a hypertrophic catarrh of the nasal mucous membrane; the inferior turbinal is most severely affected, and has frequently gone on to atrophy while the middle turbinal is still in the hypertrophic stage. 3. The most common causes are the exanthemata, coryza in infants and syphilis. Chronic purulent rhinitis leads to various changes in the nasal mucosa, notably metaplasia of large areas of the superficial ciliated epithelium into squamous epithelium; dense small-cell infiltration of the submucous tissue (most marked in the superficial layers); catarrhal changes in, and atrophy of, the mucous glands; diminution in size and number of the cavernous blood-spaces. In many cases there is atrophy of the turbinal bones, especially of the inferior turbinal. In some cases there is arterial disease, and in the majority of cases there is sclerosis of the deeper layers of the submucous tissue. These changes have their counterpart in the mucous membrane of the accessory sinuses in certain cases of chronic suppurations, in the middle ear cleft in certain cases of chronic suppurative otitis media with cholesteatoma formation, and in the bronchi in such conditions as chronic purulent bronchitis and bronchiectasis. 5. Various micro-organisms give rise to the first stage of ozena, *i. e.*, to acute and subacute purulent rhinitis—*micrococcus catarrhalis*, *pneumococcus*, staphylococci and streptococci, etc. The characteristic picture of ozena is probably only produced when the *bacillus mucosus ozenæ* is present. 6. Ozena is more likely to develop in a congenitally roomy nose than in a narrow one on account of the greater tendency in the former to stagnation and consequent putrefaction of the secretions. 7. Atrophy of the nasal tissues may be due to the pressure of the crusts and to vascular or sclerotic changes, but is probably mainly due to toxic influences. 8. Tubercle and syphilis are concerned in the production of ozena in that they may lead to chronic purulent rhinitis. 9. Accessory sinus suppuration is not the cause of ozena, though it not infrequently complicates this condition. 10. It is clearly established that ozena not infrequently occurs in several members of the same family, and there are some grounds for regarding it as a contagious disease. 11. Those who support the "primary bone disease" theory in regard to the causation of ozena have not shown that changes in the bone precede those in the mucous membrane; a lowered state of general health and neglect of treatment have

probably more to do with the transition of purulent rhinitis into ozena than "congenital tissue weakness."—*J. S. Fraser and F. E. Reynolds, Journal of Laryngology, Rhinology and Otology, April, 1911.*

Syphilis and Ocular Traumatisms.—The author discusses the syphilitic manifestations evoked by a trauma, especially those due to occupation accidents. He repeats Petit's conclusion, the general sense of which is that a wound in a syphilitic pursues an atypical course and may evoke a lesion at the site of the wound or elsewhere, either immediately or even months later. In non-urgent operations it is best to give mercury and iodides for some time previously, and if the operation fails, to give these drugs again and wait six months after the disappearance of the syphilitic lesions before again operating. Autonelli states that while it would be difficult to prove the primary inoculation by the traumatizing body, still a secondary syphilitic infection would be as much the basis for damages as would a secondary streptococcic infection. Showing the danger of an operation on a patient with unknown syphilis, a case is reported of repeated opening of an abscess of the eyebrow, which finally resulted in a phagedenia. Another case reported is that of an injury to the right eye followed by corneal ulcer, iritis and granuloma of the iris. The patient admitted syphilis contracted some years before, which had been neglected. Atrophy of the eye and necessity for enucleation was the result. Discussing the question of parenchymatous keratitis caused by ocular injury in a syphilitic patient, he reports three cases. Three conditions must be fulfilled before the diagnosis can be made: 1. The eye must have been healthy before the accident. 2. Direct or well established indirect trauma of the eye. 3. Keratitis following shortly on the trauma.—*Dr. Autonelli, Paris, Archives d'Ophthalmologie.*

Glaucoma, Acute, Subconjunctival Injections of Sodium Citrate in.—The author reports the results obtained by this measure in three severe cases. The immediate effect was to increase the pain, but this was followed in two hours by reduction, and in twelve hours by a return to normal intraocular tension. The cases all ended in recovery from practically one subconjunctival injection of a 4½ per cent. solution of sodium citrate. Aspirin internally and myotics locally were also used, but these did not do more, in the author's opinion, than augment the benefit from the injection.—*I. Heller, Annals of Ophthalmology, October, 1910.*

BOOK REVIEWS.

TEXT BOOK OF OPHTHALMOLOGY. By DR. ERNST FUCHS, Professor of Ophthalmology in the University of Vienna. Authorized translation from the 12th revised and greatly enlarged German edition, with numerous additions, by ALEXANDER DUANE, M. D., Surgeon, Ophthalmic and Aural Institute, New York. *Fourth Edition.* 989 pages, 441 illustrations. Cloth, \$6.00. J. B. Lippincott Co., Philadelphia and London. 1911.

Beside the numerous additions and corrections which Prof. Fuchs has inserted in all parts of the book, this edition is characterized and made much more valuable and interesting by a general introduction of sixty pages giving the general physiology of the eye up to date and the pathology, etiology and treatment of eye diseases as a whole.

Space forbids more than a cursory review. "The secretion of the fluids of the eye takes place almost exclusively thru the uvea. . . . The anterior and posterior chambers of the eye are known as lymph spaces. . . . A small quantity of the aqueous probably is derived from the anterior surface of the iris, even tho this can not be proved with certainty." "After paracentesis . . . the protective bodies present in the blood pass over into the aqueous." The physiological secretion of aqueous is much slower than its reaccumulation after evacuation. Lymph vessels, as distinguished from lymph spaces, occur only in the conjunctiva; they are wanting in the eyeball itself and the orbit.

Chrysarobin often causes conjunctivitis, not only locally but when absorbed in remote parts of the body. Intestinal intoxication is much too often forced to serve as a convenient etiology for the most various diseases.

Fuchs says that "headaches from the eyes are never present upon waking in the morning." The reviewer, from an experience of thirty years, disagrees with this and is glad to find a note by Duane that "to these statements some exception must be made." When discussing scopalamin hydrobromide we are sorry to note that no caution is issued against the substitution for it of its isomer hyoscyamin which is very much more poisonous; scopalamin should be prepared from the plant *scopalaria*.

Of the attempts at immunization in ophthalmology only two have proved certainly effective: that with diphtheria serum with passive immunization, and that with tuberculin immunization by active immunization. Calmette's conjunctival test (tuberculin) has been "properly" given up because "occasionally some not inconsiderable inflammations of the eyes have developed in consequence" of it.

No mention is made of carbolic acid when discussing cauterization of corneal ulcers.

We find no excuse for Dr. Duane's neglect of the opportunity to explain the reason why astigmatism should be spoken of as *astigmia*. He makes a note "[Called also astigmia.—D.]." This is not living up to his reputation for scientific thoroughness and broad knowledge.

Eye operations in general, those upon the eyeball and upon the adnexa bulbi are dismissed with eighty-two pages of the 989 in the book.

THE ACCESSORY SINUSES OF THE NOSE IN CHILDREN. One hundred and two specimens reproduced in natural size from photographs. By PROF. DR. A. ONODI, Director of the University Clinic of the Nose and Throat in Budapest. With a preface by PROF. DR. W. WALDEYER, Director of the Anatomical Institute of the University of Berlin. Translated by CARL PRANSNITZ, M. D., M. R. C. S., L. R. C. P., head of the Hydrophobia Department of the Hygienic Institute, University of Breslau, late Assistant Bacteriologist to the Metropolitan Asylum Board, London. Published by William Wood & Co., New York. 1912. Price, \$7.00, net.

While this book, on account of its full index and prominent headings, is a very convenient one for occasional reference, still to obtain the full substance of contents it requires a consecutive analytic study of the illustrations, because such care has been taken in the sequence of specimens as these cavities gradually develop. The sections have been laid in the three principal planes of the head, with exact measurements of each, thereby giving the best conception of the solidity of these regions.

A characteristic and commendable point is the presentation of illustrations in the normal size, because they do not only present the shape but impress the student's (student or operator) mind more indelibly with the size of these cavities and their exact relations with the vital structures in their immediate vicinity.

The physiologic action of these pneumatic cavities are so meagerly understood that great importance attaches to the research of their development, such as is given here for the first time so minutely.

The object lessons of the illustrations is supplemented by a few pages of text giving a few concise explanations, and also some deductions of the author, which are of material importance because of his recognized practical experiences with this subject.

To the pediatricist as well as the head specialist this book is important because, adding its information to that which he already has of the effect of malnutrition and the maldevelopment of the eruptive fevers of childhood on the growing tissues or organs of the child elsewhere, he could devise prophylactic measures which would probably prevent many catarrhal conditions in adult life.

The excellent production of the illustrations on the finest calendered paper fully uphold the enviable reputation of the publishers.

Every eye, ear, nose and pediatric specialist will find in this work

the fundamental facts upon which much clinical study as well as practical operative procedures may be founded.

LIPPINCOTT'S NEW MEDICAL DICTIONARY. A vocabulary of the terms used in Medicine, Dentistry, Veterinary Medicine, and the allied Sciences with their pronunciation, etymology and signification, including much collateral information of a descriptive and encyclopedic character. By HENERY W. CATTELL, A. M. (Laf.), M. D. (U. of P.), Editor of *International Clinics*, Fellow of the College of Physicians of Philadelphia, etc. Freely illustrated with figures in the text. *Second Edition*. Philadelphia and London: J. B. Lippincott Company.

The term, "multum in parvum," may be applied to this book, altho containing over eleven hundred pages. Every effort has been made by both author and printer to include as large amount of material clearly expressed in as compact a form as is possible. A carefully elaborated and original system of condensation has been employed in order to collect within one convenient and handy sized volume the enormous mass of vocabulary material required to express the rapidly progressing ideas and discoveries of the present day Æsculapian art. Instead of making separate vocabulary entries of each individual word, those as adjectives, adverbs, particles and derivatives formed by adding suffixes to a common root, are included in a paragraph headed by such root, or terms of similar meaning commencing with a common prefix are grouped together; thus under "glyco" is a paragraph comprising 38 individual words, covering a half page, *e. g.*, glyco-cholic acid, glyco-haemia, glyco-lytic, glyco-someter, and glyco-zinc. Terse descriptions of such procedures as Riegel's test, Riegler's reaction, etc., are found. Wassermann's reaction, 606 preparation are included as well as Prof. Ehrlich's and Mme. Curie's photo and other up to date illustrations. To the majority of our readers it will be gratifying to know that the definition of "homœopath" as adopted by the A. I. H. in 1899 is given as well as that of the Transactions of the American Institute of Homœopathy is included in the list of about seventy-five books and periodicals referred to in the text.

In no dictionary have we noted such an extensive collection of abbreviations, an innovation we doubt not will be generally appreciated, as it will greatly standardize them, so that space may be economized in both MSS. and clinical reports.

This vocabulary wealth is spread in an exceptionally clear cut type on a fine quality of paper, bound in a handsome flexible black leather cover, with thumbled index.

A POCKET ATLAS AND TEXT BOOK OF THE FUNDUS OCULI, with Note and Drawing Book. Text by G. LINDSAY JOHNSON, M. A., M. D., F. R. C. S., Fellow of the Royal Society of Italy (Modena); Hon.

Fellow der Gesellschaft Naturforschender Freunde, Berlin; Fellow of the American Society of Ophthalmology and Laryngology; late Ophthalmic Surgeon West End Hospital for Women's Diseases; Consulting Ophthalmic Surgeon Western General Dispensary, etc., with Drawings from Life by Arthur W. Head, F. T. S., illustrator of "The Mammalian Eye," Frost's "Atlas of the Fundus Oculi," etc. Published by F. A. Hardy & Company, 10 South Wabash Avenue, Chicago. Branches, New York, Atlanta, Denver. 1912. Price, \$2.50.

In this book the author presents fifty-five (55) colored plates presenting the normal fundus and ordinary diseases thereof; rare diseases are omitted, as such would nullify the object of the book—portability, convenience and everreadiness. The tinting of the illustrations is as perfect as can be artificially produced, while each is accompanied with full explanatory description.

A few concise and lucid chapters are given upon the ophthalmoscope, anatomy and ophthalmic appearances of the fundus, and most intimately related tissues, the optic nerve, its congenital peculiarities and vestigial relics; glaucoma, diseases of the retina, optic nerve, vitreous and choroid.

But the original or characteristic element is the Ophthalmic Note and Drawing Book found at the end, which consists of several blank diagrams of fundus with the position of disc and macula indicated in faint broken lines, upon which the observer may roughly sketch the vessels and abnormal findings, with a black and red pencil, which accompanies the note book. The two colored draft far more graphically recalling to the mind the original picture than that in black alone.

The ophthalmologist's vade mecum is this,—and we believe will be of great service to all eye students from the beginning to the most advanced exclusivists.

TRANSACTIONS OF THE HOMŒOPATHIC MEDICAL SOCIETY OF THE STATE OF NEW YORK for the Year 1911. Volume IV. Edited by the Secretary, Bert. B. Clark, M. D., New York City.

A volume of about 50 pages of interesting papers on widely varied subjects and replete with practical information for the daily use of the family physician. In the index we note a very good feature to assist in the study of our materia medica,—in the indexing the page where each homœopathic remedy is mentioned; over a hundred drugs are thus tabulated, with from one to five references for each.

The Journal of Ophthalmology, Otology and Laryngology

Vol. XVIII

Lancaster, Pa., and New York, April, 1912

No. 4

EDITOR'S NOTE.

IT is with regret we are compelled to beg your indulgence for breaking the almost uninterrupted appearance of our editorial this month; but the necessary assumption of full charge of the JOURNAL at the otherwise busiest season of the year has obliged us to curtail somewhere, and we deemed it would be least missed here.

The JOURNAL and its readers, we believe, may be congratulated upon obtaining as collaborator Dr. Frank O. Nagle, of Philadelphia, who will fill a desideratum appreciated by its editorial staff,—the presentation of current study of the specialities by the German investigators, by abstrating of the best German literature, etc. The doctor's special study at the University of Breslau and Vienna particularly fits him for this practical part of our work. The staff wish to publicly thank him for his acceptance of the JOURNAL's invitation to act as collaborator, and especially for the interest he shows in this specific line.

THREE CASES OF SCLEROTIC DEAFNESS AND THEIR LESSON.*

HOWARD P. BELLOWS, M. S., M. D.,

Boston, Mass.

IF a spirit of optimism is needed anywhere in the whole range of medical practice it is in the treatment of sclerosis of the middle ear. Almost universally the opposite spirit prevails, and nothing else is warranted by the meager results which usually attend even the best directed treatment of this disease. By some practitioners it is hardly considered honest to treat the disease at all. I heard this voiced many years ago, in my student days, when I heard an aurist of world-wide reputation remark, as a patient with sclerotic deafness was leaving his clinic, "of course no honest man will treat a case like this." That particular patient was very probably beyond any hope of relief, and the professor's position commendable, but surely too many aurists are prone to assume this point of view when the disease is still only in progress and there is a remnant of hearing still remaining. I believe it to be worth every effort, on the part of both physician and patient, to hold such a remnant from slipping away utterly. I believe it to be possible in the great majority of sclerotic cases to hold the disease in check, at least, if the tissue changes have not been too profound before the patient is seen by us. Let us be honest in telling these patients that there is no hope of cure, but that there is hope of checking the inevitable loss which will continue without treatment. Assuming the case with only this end in view we will sometimes be surprised, and our patient gratified, to find a degree of hearing actually returning, and this in the end may be quite beyond our most sanguine hope. It has been my good fortune to have cases of this nature and I am going to cite three of them for a double purpose—first to constitute a plea for the patient and persistent treatment of these cases when not already too hopelessly advanced and, second, to furnish encouragement for the continued effort of those among my colleagues

*Read at the International Homœopathic Congress.

who, by reason of a succession of the disappointing cases which come to all of us, may be tempted to assume that all sclerotic deafness is hopeless and bound to increase despite every effort of the aurist.

CASE I.—Prof. —, age 51, of nervous temperament but in good general health, consulted me for deafness January 21st, 1902. Occupying a position of much importance in one of our large universities it was of vital moment that he should at least retain the lessened degree of hearing which still remained to him. For fifteen years he had been under treatment in many large cities, here and abroad. Since childhood he has been subject to tinnitus, of buzzing and throbbing character, and this was present for years before the deafness became noticeable. This tinnitus varied greatly and at the time of his first visit to me had become somewhat quieter than formerly. Nervous excitement caused a pulsation in the ears, worse upon the right side, and increased the general tinnitus. This was also distinctly increased by fatigue and by colds, especially the former. Autophony was sometimes present. The hearing was markedly better in noisy places. For several years there had been difficulty in determining the direction from which sounds proceeded. There had been several recent "dizzy spells," caused by a sudden snap in the ears.

Upon examination the external canals were found deficient in cerumen. The membrana tympani were practically normal in appearance, their position good, light spots perfect and surface lustrous. Upon the left side the malleus was a trifle shrunken as compared with the right, but otherwise appeared normal. The throat was slightly catarrhal, but not enough to necessitate morning clearing. The Eustachian tubes were pervious. From the vertex the sound of the C fork was referred to the left side. Bone conduction was better than air conduction upon both sides. The tone of fork C-² was lost upon both sides, but all other forks from C-¹ to F⁴ were heard.

H.D.R.w. (40" normal) = $6\frac{1}{2}$ " = 10 Pol. = $10\frac{1}{2}$ vibration = — H.F.

H.D.L.w. (" ") = 2" = 4 " = 6 " = $6\frac{1}{2}$ "

R. Loudest whisper = 15 feet before and 20 feet after treatment.

L. " " = 14 " " " 15 " " "

Prescribed Kali mur. 3x every 3 hours.

June 10, 1902. Left for summer vacation. Had been treated once a week since his first visit by occasional inflations, always very gentle, by vibratory massage and by the high-frequency current, each of these latter being used for a minute or a minute

and a half only. Internally he had received sometimes Kali mur. 3x, sometimes Strych. phos, 3x, and during colds Merc. dulc. 3x. The measurements at this date gave:—

H.D.R.w. = $13\frac{1}{2}$ " = 16 after treatment.

H.D.L.w. = 5" = $6\frac{1}{2}$ " "

The same testing watch, heard normally at a distance of 40 inches, was used for all measurements throughout this case.

Sept. 23, 1902. Returned after vacation.

R.w. = $6\frac{1}{2}$ " = $8\frac{1}{2}$ after treatment.

L.w. = $3\frac{1}{2}$ " = 3 " "

Jan. 6, 1903. R.w. = 9 = 10 Faradic $1\frac{1}{2}$ m. 3 positions.

L.w. = 8 = 9 " " "

The Faradic current was so gentle as to be merely felt distinctly, never causing either pain or contraction, and was applied as evenly and steadily as possible, over the tragus, within the meatus and in the hollow beneath the tragus—a half minute in each position. The treatments were given regularly, by appointment, once a week—and this frequency of treatment was continued throughout this case. Internally the patient received occasionally Nux vom. 3x, but for the most part took either the Kali mur. or Strych. phos., usually 4 doses a day.

June 2, 1903. Leaves for vacation.

R.w. = 16 = 17 Faradic.

L.w. = 8 = 10 "

Oct. 6, 1903. Returned from vacation.

R.w. = 4 = 5 inflation and Faradic.

L.w. = $\frac{1}{2}$ = $\frac{3}{4}$ " " "

Jan. 5, 1904. R.w. = 14 = 16 Faradic.

L.w. = 10 = 13 "

The patient at one time was given Hydras. mur. 3x on account of the condition of the naso-pharynx, but aside from this took nothing but Kali mur. 3x.

June 7, 1904. Leaves for vacation.

R.w. = 12 = $12\frac{1}{2}$ Faradic.

L.w. = $12\frac{1}{2}$ = 13 "

Oct. 4, 1904. Returned from vacation.

R.w. = $10\frac{1}{2}$ = $12\frac{1}{2}$ Faradic.

L.w. = 9 = — "

Jan. 3, 1905. R.w. = $9\frac{1}{2}$ = $11\frac{1}{2}$ Faradic.

- L.w. = 10 = 11 “
- Jan. 9, 1906. R.w. = 17 = 24 H.F.C.
L.w. = 17 = 18 “
- Jan. 1, 1907. R.w. = 23 = 22 Faradic.
L.w. = 27 = 29 “
- May 28, 1907. Stopped till after vacation.
R.w. = 42.
L.w. = 40.
- Oct. 15, 1907. Returned from vacation.
R.w. = 12 = 20 Faradic.
L.w. = 17 = 21 “
- Jan. 7, 1908. R.w. = 11 = 19½ Faradic.
L.w. = 32 = 39½ “
- Jan. 5, 1909. R.w. = 36 = 43 Faradic.
L.w. = 46½ = 53 “
- May 25, 1909. Vacation.
R.w. = 41.
L.w. = 43.
- Sept. 25, 1909. Returned from vacation.
R.w. = 4½ = 12 Faradic.
L.w. = 9 = “

Underwent severe surgical operation during the summer and hearing was much depressed in consequence.

- Jan. 4, 1910. R.w. = 35 = 39 Faradic.
L.w. = 46½ = 49 “
- Jan. 10, 1911. R.w. = 41 = 50 Faradic.
L.w. = 43 = 51 “

In applying the Faradic current in this case I used a small induction coil designed for lighting diagnostic lamps, this supplying a current of low voltage but comparatively large amperage. The primary of the coil is 8" long and 7/8" in diameter. The secondary is of the sledge type, being about 4" long and 1½" outside diameter, including casing, and sliding over the primary. The current is taken from the secondary. During these years of treatment the patient has been given Merc. dulc. 3x during colds, Hydr. mur. 3x sometimes following colds, and Nuv vom. 3x when gastric or nasal symptoms demanded it, but for the most part has received only Kali mur. 3x or Strych. phos. 3x, much of the time a dose at night or night and morning only.

The tinnitus is seldom noticed and the canals secrete cerumen almost normally. The improvement for the voice is not as great as for mechanical sounds, but his hearing is absolutely serviceable at all times. I feel that much of the credit for this improvement of an apparently almost hopeless condition is due to the patient himself—for very few men are willing, by their perfect regularity and perseverance in treatment, once a week, year in and year out, to give their physician such an opportunity to help them as this patient has given me.

CASE II.—Miss —, age 27, a private secretary, applied to me for treatment May 29, 1905. Had been very deaf for twelve years in spite of treatment, and found difficulty in filling her position acceptably. Little tinnitus had been noted and few subjective symptoms. Fork C, vibrating on vertex, was heard better on left side. Bone conduction better on both sides. Membrana tympani slightly thickened. Eustachian tubes free, but hearing decreased by inflation. No post-nasal catarrh.

H.D.R.w. (40") = $\frac{1}{2}$ ".

H.D.L.w. " = c.

Oct. 31, 1905. R.w. = 2".

L.w. = 2".

The patient had received a treatment regularly once a week, since her first visit to me, by means of gentle massage, one minute on each side, followed by the high-frequency current, also for one minute on each side. Internally she had been taking continuously Kali mur. 3x, 4 doses a day. Today the Faradic current was substituted for the high-frequency, but the former treatment otherwise continued.

May 29, 1906. R.w. = 7.

L.w. = 11½.

The patient had been under treatment one year. For about four months gentle inflations had been found to improve the hearing instead of depressing it, as formerly, and had been employed every week in the treatment. The Faradic current had been almost exclusively used and the Kali mur. continued, with occasional intercurrent doses of Sulph. 6x.

June 4, 1907. R.w. = 17½.

L.w. = 32.

Two years of treatment had elapsed, the same general course

having been followed, with gentle inflations at many but not all treatments, with vibratory massage always employed in some form, and with electricity changed from the Faradic to the high-frequency from time to time. Internally the Kali mur. was continued till Oct. 23d, followed by Phos., mostly 6x, until Feb. 26, and after that date Kali phos. 3x. The treatments were continued very regularly once a week.

June 2, 1908. R.w. = 44.

L.w. = 48.

Three years of treatment upon the same general plan had raised the hearing distance to normal for the watch, but the hearing for the voice was still below normal, although greatly improved. The internal remedy was Kali phos. 3x until Feb. 3, and since then Phos., mostly 200th, with placebo.

June 7, 1909. R.w. = 36.

L.w. = 38.

During this fourth year of treatment the hearing was very evenly maintained, but was somewhat depressed upon the above date in consequence of a cold. The only local treatment was the high-frequency current, applied for one minute back of each ear, and the only internal remedy occasional doses of Phos. cc., with placebo.

June 6, 1910. R.w. = 38.

L.w. = 40.

The fifth year showed a little variation in the hearing. In September the high-frequency current lowered the hearing distance upon three consecutive treatments and the Faradic was substituted with immediate benefit. This current was, therefore continued. Internally an occasional dose of Phos. cc. was given, with placebo. The treatments now averaged about once a month.

May 25, 1911. R.w. = 42.

L.w. = 40.

Occasional treatments during the sixth year served to maintain the hearing. At one time, as a result of colds, there was temporary loss, but vibratory massage, with the Faradic current and Kali mur. internally, was again resorted to with success.

CASE III.—Miss —, age 34, in fair general health, consulted me Oct. 5, 1905, on account of deafness of high degree. Deafness

had developed gradually for seven years, with slight tinnitus at first, but more latterly. There was no autophony and no post-nasal catarrh of any moment. Was liable to basilar headache. The hearing was variable, but always better in noisy places. Had been losing the hearing rapidly during the preceding six months. The sound of fork C, vibrating upon the vertex, was not referred to either side. Bone conduction was better than ærial upon both sides. All forks were heard upon both sides with the exception of C-1. The Galton whistle was heard 0.5 right and 0.6 left. The membrana tympani were slightly thickened and depressed. The Eustachian tubes were open, but even gentle inflation lessened the hearing distance.

H.D.R.w. (40") = $\frac{1}{2}$ ".

H.D.L.w. " = p.

Prescribed Kali mur. 1x, 4 times a day.

Sept. 29, 1906. R.w. = 10".

L.w. = c.

During the first year of treatment pneumatic massage was used about once a week, for a minute upon each side, followed by the high-frequency or the Faradic current; also one minute upon each side. The internal remedy was Kali mur. 3x, 4 times a day.

Oct. 5, 1907. R.w. = 13½".

L.w. = 14.

The treatments were more regularly followed, once a week, during the second year of treatment. The Faradic current was used at the beginning of every treatment, followed by gentle vibratory massage. Inflations were never employed. The Kali mur. was continued for the most part, but Kali phos. 6x was sometimes substituted for a week at a time.

Sept. 30, 1908. R.w. = 16.

L.w. = 17.

The treatments were less frequent during the third year, averaging about two a month. There was little or no variation in the plan of treatment, but Phos. 6x was used at one time for six weeks instead of the Kali mur.

Sept. 27, 1909. R.w. = 16.

L.w. = 19.

Only nine treatments were given during this fourth year, in all

respects similar to those preceding. Phos. 3x was prescribed three times, Sulph. 6x once, and Kali mur. 3x five times.

Oct. 1, 1910. R.w. = 9.

L.w. = $15\frac{1}{2}$.

Eight treatments during the fifth year scarcely served to hold the hearing. Kali mur. was the only internal remedy used and the local treatments were unchanged—the hearing distance improving markedly at the time of each treatment.

June 20, 1911. R.w. = $24\frac{1}{2}$ = 29 Faradic = $35\frac{1}{2}$ vibratory massage.

L.w. = 31 = 34 “ = 42 “ “

Seven treatments have thus far been given during this sixth year, and the hearing has reached the highest point thus far attained. Could the patient come oftener the progress would be hastened, but that is impossible since both her time and means are limited, and she lives nearly fifty miles from my office. The prescriptions this year have been Nux vom. 3x twice, China 1x twice and Kali mur. 3x three times.

Now a few words in closing. It must not be thought that these three cases are presented as representing the ordinary success of anybody in treating sclerotic deafness. In my experience these are not ordinary cases, but very unusual ones. They are picked cases, and as such I present them. My own average success with sclerotic cases falls far short of the exceptional results here exhibited, and sometimes blank failure attends my most persistent efforts. But therein lies the very purpose of this paper. It is because of these failures and these tardy and imperfect successes that we need encouragement by the occasional exhibition of the possibilities of treatment in this disease. Our sclerotic patients are entitled to a long and painstaking trial on our part, at least, and not to consignment, without further treatment, to inevitable deafness—as was one of the three cases here presented at the hands of an aurist whose authority has world-wide recognition. In my personal experience of many years there are few sclerotic cases which, if taken reasonably early, cannot at least be held from further loss so long as a fair degree of general health is maintained. But this requires absolute coöperation on the part of the patient, and on the part of the physician a recognition of the full difficulty of the task and a willingness to work on and on, with regularity and persistence, without despising the meagre results. These are cases in which coaxing is possible, but driving is impossible. At my hands none but the

gentlest measures succeed. What the conduct of these cases would be without the homœopathic remedy I do not know—I have never attempted to treat them without this aid and would not think of doing so. But with this resource at our command, in addition to the other measures whose use is common to all schools of practice, we are doubly equipped for our task. Time and again we will find cases which, undertaken with the sole hope of checking further loss, will result in unexpected gain. It is an old proverb that "Difficulties are opportunities." Here is an opportunity for every aurist to prove his mettle.

The Correction of Depressed Deformities of the Nose By the Transplantation of Bone From the Rib.

DR. WILLIAM WESLEY CARTER, New York City.

Abstract: The bridgesplint operation is suitable in all cases of deformity whether they be congenital, traumatic (recent or old), or resulting from disease, provided that there remains a sufficient amount of bony tissue which can be used in reconstructing the framework of the nose and which will retain the nose in its normal position after the removal of the supporting bridge. This method corrects also the intranasal deformity.

The transplantation of bone from the rib of the patient is suitable in all cases where there is a deficiency in the bony framework, including syphilitic deformities where the disease has been eradicated, as shown by a negative Wassermann test. This operation must frequently be combined with the bridgesplint operation.

Description of operation: Two inches of the ninth rib on the right side are removed without the periosteum; this section is split, the medullary tissue scraped off, and a piece of the compact bone shaped to suit the deformity. A transverse curved incision is made between the eyebrows, and working thru this the tissues over the dorsum of the nose are elevated. The bone is then introduced, the lower end reaching nearly to the tip of the nose, the upper end being anchored under the periosteum over the nasofrontal process.

Bone transposed from the rib into the nose of the same patient is not a foreign body, for it is of the same chemical constitution as the tissues surrounding it in its new position; it continues to live and there is no disturbance of nature's nutritive processes.

Accidental infection of the operated area does not necessarily mean failure of the operation.

SYMPOSIUM--THE LYMPHOID RING.

THE LYMPHOID RING FROM THE VIEWPOINT OF THE GENERAL PRACTITIONER.

A. B. SCHNEIDER, M. D.,

Cleveland, Ohio.

A CONSIDERATION of the lymphoid ring from the general practitioner's viewpoint resolves itself into two propositions, viz., when to recommend cases to the specialist and what to do for the cases retained. I do not support the view that all cases of rhino-pharyngo-laryngeal disease should be immediately relinquished to the specialist, either for operation or for treatment. Neither do I believe that the general practitioner can adequately fulfill the function of the specialist in his various and increasingly diversified fields. I do hold, however, that judgment should temper the radical mind and that diagnostic acumen and prognostic good sense should be exercised in this day of more or less general recommendation of indiscriminate obliteration of organs which doubtless serve a purpose in the animal economy and which morphological and comparative as well as limited clinical data clearly indicate are not vestigial. Freedom from ill results following removal of these organs can at most suggest that their purpose has been subserved early in life or that their function may at any time be compensated for by remaining lymphoid structures. Pathological investigations indicate that under the irritating influence of infectious organisms these tissues are stimulated to the proliferation of increased numbers of militant phagocytes and that there is in the blood elaboration of specific antibodies protective against related infections. That a definite relationship exists between tonsillar affections and certain systemic diseases is evident in clinical history, but should the tonsil because of occasional failure in its possible protective function be doomed indiscriminately to destruction?

Early hypertrophy of this tissue to the extent of definite interference with respiration is undoubtedly productive of serious developmental faults of the respiratory organs, accompanied by markedly deficient physical and mental vigor. In these cases early appropriate

operative treatment is unqualifiedly endorsed, for we cannot wait for delayed remedial action or for the patient to outgrow his troubles.

Tonsillotomy may do for simple hypertrophy, but in cases which promise a recurrence of the lymphoid overgrowth and in cases of chronic tonsillar infection an operation which leaves the root of the evil is manifestly unsuitable and should be superseded by the more radical enucleation. Subsequent administration of the indicated remedy will do much to make these operations permanently successful.

To the general practitioner is accorded the opportunity of observing lymphoid hypertrophy in its incipency and such opportunity rightly grasped would mean many a *Calcarea carb.* baby saved a future of adenoids and operations by a few timely doses of the appropriate remedy. *Calcarea iodide* and *Ferrum iodide* are remedies also frequently indicated in this class of cases.

In acute inflammations the indicated remedy and mild local measures are usually sufficient. Often a dilution of the indicated remedy is of decided value as a local application.

Careful attention should be accorded the heart in these cases, and all patients with fever should be kept in bed and not haled to the office for radical abortive treatment. If this plan is followed rheumatism and endocarditis will figure less frequently as sequellæ of acute tonsillitis.

To offer all the remedies which might find themselves reflected in the somewhat varied symptomatology of these affections would entail the transcription of a large part of the *materia medica*.

I will cite only a few of those most commonly used by myself and confreres. These include *Aconite*, *Belladonna*, *Gelsemium*, *Mercurius*, *Pulsatilla* and *Sambucus* for the acute inflammations, and *Arsenicum iodide*, *Calcarea carb.*, *Calcarea iodide*, *Ferrum iodide*, *Baryta carb.*, *Hepar*, *Sulphur*, *Hydrastis*, *Kali bichromicum*, *Mercurius* and *Sanguinaria* for the chronic affections.

Tuberculin is a remedy of great value if cautiously used. Proper sanitary and hygienic conditions are important factors in the treatment of these affections and should always receive careful attention.

The immediate concern of the specialist may be the case in hand and the condition present. The general practitioner should consider as well the all important question of prophylaxis and combat especially the inherited tendencies and the malnutrition which are so frequently etiological factors in affections of this kind.

520 Rose Bldg.

THE LYMPHOID RING FROM A SPECIALIST'S POINT OF VIEW.

W. H. PHILLIPS, M. D.,

Cleveland, Ohio.

MY friend, Dr. Schneider, said to me in a somewhat sarcastic manner when this symposium was projected, "I suppose your paper will be short, perhaps one word, for the lymphoid ring from a specialist's point of view spells 'operation.'" In the last analysis his diagnosis would probably stand as correct, but first always the culprit must be tried and found guilty before he can be executed. I shall attempt to lay before you only the evidence in the case; you must be the judge as to whether execution is merited or not. Aside from those older charges, the production of aprosexia, backwardness in school, moral degeneration, criminal tendencies, etc., which have been rehearsed so often as to need but a passing mention here, and then only for the sake of completeness, the chief charges against the lymphoid ring are the following:

First: That in a pathological state it is ever ready to take on our prevalent grip infection and pass it on to other more vital and less resisting structures; that it serves as a relay station for perpetuating the infection and perpetrating relapses.

Second: That it is through this ring that the infection or toxic material finds entrance, which is responsible for that bane of youth, acute rheumatic fever, with its associated endocarditis and subsequent valvular insufficiency.

Third: That it is the one great factor in the etiology of acute and chronic middle ear disease.

Fourth: That it is probably the etiological factor in some obscure eye diseases, perhaps more often so than is generally recognized.

Fifth: That it at least occasionally becomes the nidus of a tubercular infection, and may be the pathway through which glandular, meningeal, pulmonary and mesenteric tuberculosis occurs.

As Regards the Grip.—Those of us who have observed carefully many cases of grip infection this year have been impressed with the fact that the naso-pharynx and the faucial tonsils have seemed to bear

the brunt of the infection, at least in the beginning. The glands were swollen, pale, exuding a thick viscid mucus loaded mostly with pneumococcus. Follicular tonsillitis was very common and the loop passed deep into the crypts showed mostly this same infection. In children especially, where this condition of the lymphoid ring was apparent, relapse after relapse occurred; the child recovered from one rhinitis or bronchitis only to relapse directly into another without exposure or provocation of any kind.

The etiological relation of these tonsils and adenoids to these relapses became apparent when it was found that their removal surgically was followed by a prompt cessation of the attacks. This held true for adults as well, although not so surely, for in these cases there was often some nasal or sinus affection present which likewise perpetuated the infection.

That the tonsil is the portal of entrance for the infecting agent or its toxin in acute rheumatic fever is recognized today by most textbook writers. While it may follow any form of infective tonsillitis it is peculiarly apt to follow streptococcal invasion. So we find it following scarlatinal tonsillitis and the grip infections associated with strepto rather than those due to the pneumococcus. The grip infection of the winter of 1909-10, when streptococcal tonsillitis was very prevalent in the middle west, was prolific in acute rheumatic fever, while that of 1910-11, when the prevailing infection seemed to be the pneumococcus, has shown comparatively few cases aside from those associated with scarlet fever.

Toxic endocarditis with its resulting valvular insufficiency, either as a complication of acute rheumatic fever or as an entity, must also be attributed to tonsillar infection. Acute parenchymatous nephritis has been lately reported several times by laryngologists and internists as following severe attacks of tonsillitis in such a way as to leave no doubt in the minds of the observers that it was the result of toxic absorption from the tonsils. Diphtheria and scarlet fever probably find this ring an open gateway for shooting their specific poisons into the system. A few years ago in city hospital work, and in intubation work in private practice, I saw a large number of cases of scarlet fever, pharyngeal and laryngeal diphtheria, and I do not remember a single one of these diseases occurring in a patient in whom thorough adenoid and tonsil work had been done.

Acute middle ear disease is practically invariably a direct extension

of infection from an adenoiditis. Whether the adenoiditis is primary or secondary does not matter. The location of this part of the lymphoid ring in children, and its remains in adults, is such that its infection would naturally be propagated to the tubes and on up to the tympanum. Moreover it is practically impossible to rid the patient of the otitis while the adenoiditis persists, reinfection being constantly established. So true is this that, personally, I often advise an adenectomy in acute otitis media as soon as the temperature becomes normal. In mastoid work, for acute infections also, I always do an adenoid operation if the patient be a child and explore the naso-pharynx for adhesions or infected remains of an adenoid, if an adult. Simple chronic middle ear inflammation, and likewise the hypertrophic and hyperplastic forms showing drumhead changes, are almost invariably caused and perpetuated by a chronic adenoiditis, which, in turn, may of course be dependent upon nasal or palatal deformities. I have never been able to satisfy myself as to the relation tonsil inflammation bears to middle ear affections. Much has been written regarding pressure symptoms and tinnitus being caused by enlarged and diseased tonsils, but frankly I am sceptical. One never sees a suppurative otitis associated with a quinsy or peritonsillitis, nor are ear symptoms a common accompaniment of a simple tonsillitis without suppuration. On the other hand, an infective adenoiditis almost always presents some ear complications, possibly mild, but present just the same.

Not much is found in literature regarding the association of eye diseases with tonsil inflammations; in fact, I do not remember having read a single paper on this association among all the valuable ones on tonsil studies which have been published in the last five years. I wish to cite briefly two of several cases in which I have been especially interested in this connection. A young married woman of twenty-five presented a history that since fifteen years of age she had had repeated attacks of inflammation of the left eye with much disturbance of vision. These attacks would last for from six to eight weeks, would gradually disappear, and, when the eye was almost well, would suddenly recur with all the old intensity. This had been a continuous performance for ten years. She had consulted many oculists and had been under treatment for months at a time without being relieved. When she came to me she presented a marked episcleritis with a corneal involvement not unlike a trachomatous pannus. The right cornea showed marked evidences of an old phlyctenular keratitis. A Von

Pirquet test was made and was decidedly positive. She was put upon tuberculin, Baz. Emuls., 1-10,000 mg., every third day. Improvement was prompt and decisive for a while, and it looked for a time as though she were going to get well. Then one day after a dose of 1-2,000 mg. she had a severe headache, some rise in temperature and prostration, and the eye grew rapidly worse again. After this she seemed to develop a state of anaphylaxis so far as tuberculin was concerned, so much so that it had to be discontinued altogether. In casting about for some reason for this state of affairs I examined carefully again the nose, throat and chest. The nose and its accessory cavities were practically normal, so was the chest, but the faucial tonsil on the left side was large and pale, tender and full of cheesy debris. Externally it presented some induration to the finger, and there was a small scar present where she had had a suppurative adenitis ten years before. The right tonsil was apparently not much involved. Enucleation of these tonsils was advised, and after due consideration was accepted and performed. The left tonsil when shelled out of its bed was of large size and when cut open was full of caseous material. Bacteriological examination did not demonstrate any living tubercle bacilli. The right tonsil was small, contained no caseous material and its crypts were clean. Very shortly after tonsillectomy improvement again began in the eye. The apparent anaphylactic state disappeared, the tuberculin resumed and the dosage rapidly increased to 1-100 mg. She never, after the tonsillectomy, showed a reaction to the tuberculin: the attacks ceased, the cornea cleared and her general health markedly improved. It is now six months since the tonsil operation and there has been no recurrence. I saw her last the 8th of June.

The second case, which I shall cite but briefly, was a little youngster, seven years of age, who for eighteen months had had an almost constant phlyctenular conjunctivitis. She had been under the care of two good oculists of Cleveland and finally when money or patience gave out went to a large hospital clinic, where she had been in attendance for over six months without relief. Two sisters had died of tuberculous meningitis within three years. A lymph adenitis of the neck, both sides, was present.

The tonsils were of the submerged type and their enlargement was very perceptible to the finger applied behind the angle of the jaw. A small adenoid was present. Von Pirquet's test was positive. Tuberculin, Baz. Emuls., was used in ascending doses for a short time with

improvement. Then a tonsillectomy and adenectomy was done and the tuberculin continued with complete relief to the eye trouble. I advised a continuance of the tuberculin with this patient for some time, but as quickly as the eye trouble disappeared the patient disappeared too and I heard no more of her till about a month ago. A district nurse who knew of the child reported to me that she was attending a tuberculosis clinic, as the mother was afraid this child would go as the other children had. So far as she knew the eyes had remained well. I treated also a case of severe and obstinate irido-cyclitis last spring, which followed an attack of grip and a streptococcic tonsillitis. These cases are typical of a class of eye troubles which I am inclined to believe can be traced directly to tonsillar infection. In my experience the majority of these respond to a tuberculin test and the clinical features are those of tuberculous infection, but this is not necessarily true, as in the case of irido-cyclitis.

The relation of lymphadenitis of the neck to infections of the lymphoid ring seems fairly well established. Undoubtedly the ring stands in etiological relation to such infections, anatomical studies and clinical experience confirming the same. It is well known too that complete enucleation of the submerged tonsil usually associated with the adenitis will of itself often promote complete resolution in the glands.

It is a question how often tuberculous meningitis is dependent upon a tuberculous adenitis. Tuberculous meningitis is almost invariably basilar, involving a portion of the meninges or the blood vessels in intimate relation through the circulation with the naso-pharynx, and thus, through the lymphoid ring, with the tonsils and lymphatic glands of the neck. Might not this explain the fact that T. Men. is a disease of life when the lymphoid ring is most active and disappears largely after puberty when the same structures supposedly begin to cease from their labors? That pulmonary infection can occur directly from tonsillar infection has been shown by injections of tonsillar tissue with paint, and tracing the pigmentation directly through the deep cervical chain to the lung apex. Mesenteric and visceral tuberculosis might easily be brought about by swallowing infected secretions from the diseased lymphoid ring. In fact, it is an open question today whether tuberculosis is not always acquired through the pharyngeal lymphatics. Only a little while ago I heard Ballenger make the statement that if all the children for the next two generations had their tonsils and adenoids removed thoroughly during the first two years of life, he believed tuberculosis could be stamped out, intimating thereby his

belief that these were the pathway for all tuberculous infections. Whether this was merely the statement of an enthusiast or was the logical conclusion arrived at as the result of his large experience and observation I do not know. The facts in our possession at present do not seem clearly to bear out this belief since most observers have failed to find in enucleated diseased tonsils evidences of tuberculosis, except the disease be already present elsewhere, when there is no evidence to show that the tonsillar disease is not itself the secondary infection.

Again, tonsils enucleated in the presence of an active tuberculosis elsewhere often fail to exhibit tuberculous changes. All these things may be explained by the fact that the lymphatic glands are the manufacturers of the leucocytes—that terminal lymph glands like the lymphoid ring components, receiving an infection from without, may pass part of it on to more vulnerable structures and then by an increased leucocytosis destroy what remains within themselves. In this way a distant focus might be established while the path by which it entered would appear sterile.

Again, most observers have reported tonsil examinations only while it is more than possible that the adenoid is the greater offender. These are questions the laryngologists will have to clear up, and those of us who have large opportunity should make careful and accurate examinations and publish results for comparison. I repeat, I have said nothing in this paper regarding aprosexia, school backwardness, moral degenerations and criminal tendencies, voice disturbances, general nutritive disturbances and the myriad other disturbances which belong to the lymphoid ring diseases, as these have been threshed over time and again in the past. Operative measures, their indication and justification belong entirely to the following paper.

1018-1020 Rose Bldg.

SURGICAL REMOVAL OF TONSILS.

FINGER ENUCLEATION.

HAROLD A. FOSTER, M. D.,

New York City.

INCOMPLETE surgical procedures, leaving the base of diseased tonsilar tissue in the throat with resulting grievances to both patient and operator, have been largely surmounted by various forms of *complete* removal.

It is the purpose of the writer in this paper to describe the method which he has adopted and regularly employs, namely: Finger Enucleation.

No physiological function of the tonsil has yet been proven. It is developed in embryo between the fourth and fifth month. It is, in fact, the redundant portion of the hypoblast where that structure joins the epiblast, so development before this time at least is not dependent upon its presence. Tonsils are fully developed at birth, and remain prominent until the third or fourth year, when they begin to atrophy, and if not diseased decrease in size and disappear at about puberty.

A brief outline of the anatomy of the faucial tonsil will refresh our knowledge and pave the way to a better understanding of the subject at hand. The tonsil is an encapsulated organ lying in a bed of loose connective tissue in the tonsilar fossa, bounded anteriorly and posteriorly by the faucial pillars. The anterior pillar contains the palatoglossus muscle; inwardly from this muscle the pillar continues as a band of mucous membrane and joins the surface of the tonsil; it is this mucous membrane band which we perforate with the tip of the finger to gain admittance to the capsule. It is in evidence in prominent tonsils, but is folded upon itself, between the pillar and tonsil, in buried, atrophic and cicatricial tonsils. The posterior pillar contains the narrow sheath-like portion of the palate-pharyngeus muscle; above the pillars joined to form the supra-tonsilar fossa, the frequent location of peri-tonsilar abscess. In small cicatricial tonsils it is sometimes necessary to gain admittance to the capsule through this recess.

The outer wall of the tonsilar fossa is composed of the superior constrictor muscle of the pharynx.

The main blood supply is the tonsilar artery which enters the organ at the pedicle; the lower anterior part. The branches follow the connective tissue sheath and give off a branch to each follicle and to the papillæ of mucous membrane, and divide into a meshwork of capillaries.

In a recently enucleated tonsil these branches can be seen following the capsule. The blood supply of the tonsil itself is limited, while the pillars have a rich blood supply.

The surface of the tonsil shows from ten to twenty crypts which penetrate the body to its sheath, and at the bases of these follicles are active mucoid glands. If the tonsils are buried the secretions are retained.

That the tonsil is remarkably subject to tubercular infection is indicated by the fact that in a series of fifty cases which have been examined by Dr. Harry C. Sayre, 44% were found to contain active tubercular bacilli.

This *may* be of secondary infection, but from their exposed position—open to the ingress of air with every breath, in contact with every swallow of food and the air currents during speech, we must believe that there are *some* primary infections. As to primary tuberculosis of the tonsil, there is a difference of opinion, many holding that the tonsillar infection comes from the lungs by the way of blood of lymph currents or by the passage over them of the secretions poured out by the bronchial passages. Clinically it is often proven that the primary focus is in the tonsil, as the symptoms of tuberculosis so frequently disappear after tonsillar removal.

Tonsils should be removed in persistent inflammatory conditions, either recurrent attacks of acute tonsillitis, chronic inflammation or tendency to peri-tonsillar abscess; also in cases where there are resulting auditory symptoms arising from pressure or in hypertrophy causing mouth breathing.

The appearance of the tonsil cannot be depended upon for estimating the size or shape, and palpation should always be employed, for the tonsils may either nearly meet above the uvulæ or present only a comparatively small surface.

For enucleation of the tonsils I prefer a general ether anæsthetic and one administration—placing the patient to the degree of loss of reflexes is sufficient—a second administration is not called for.

The patient is placed in the dorsal position. The operator is at the patient's right side with the light coming from the same direction.

After the patient is fully anæsthetized, the mouth gag is fixed and the assistant supports the head. The first and most important step to insure proper enucleation is to gain admittance to the capsule through the mucous membrane band, which is the continuance of the anterior pillar. This is done by placing the tip of the right index finger on the above named mucous membrane fold of the right tonsil at its equator. The operator now directs a few sweeps outward and forward, separating the anterior pillar from the capsule. Ordinarily a slight amount of force only is required, but in atrophic and cicatricial tonsils a fair amount of force is sometimes necessary.

After the important step of reaching the capsule has been accomplished the distal phalanx sweeps upward, outward and then backward around the capsule as far as the posterior pillar. Now the globe is drawn forward to avoid tearing the posterior pillar and the finger sweeps around the base. The tonsil is retained in the throat only by the small pedicle. If the tissues are not too fibrous the pedicle is freed by the index finger or by it with the assistance of the thumb, but in very fibrous tonsils the vulsellum is used to draw the tonsil through a small snare, and the pedicle is freed close to the wall of the throat.

In order to free the pharynx of blood, the patient by the anæsthetist and assistant or nurse is quickly turned face downward to allow the blood to escape. No sponging is required.

The left tonsil is now freed by the left index finger, following the corresponding direction. No irrigation is necessary and the syringe of Peroxide, which is often used, is dangerous. Bleeding ceases as quickly without its use as with it. Several cases calling for tracheotomy, and several cases of death due to asphyxiation, have been reported from its use.

In ordinary cases the time needed for the complete operation does not exceed two minutes. The tonsils are removed entire, and in the 1,500 cases in which the writer has employed finger enucleation no hemorrhage has occurred.

If difficulties arise, it is not the fault of the tonsil, but of the technique; for any tonsil, whether in a child or in an adult, whether soft or cicatricial, whether partial removal has been performed or not, may be removed by finger enucleation.

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DISCUSSION.

WM. M. MUNCY: It is a great pleasure to me to hear Dr. Foster read his paper and I am glad to say that as a classmate of mine we are still traveling the same way. The enucleation operation for the tonsil is the only one that I use in my practice. It has the merit of completeness of removal of the tonsillar tissue. I have seen a number of cases where small portions of tonsil tissue were left in, not apparent at first, but plain enough in their effects when inflammation set in. I have seen these remnants red and inflamed, though not any larger than the finger-nail; they were the cause of considerable irritation. The removal of these small fragments cured the patient so that they did not have any more attacks. That imperfect removal was the trouble of many cases under the guillotine method.

As far as hemorrhage goes I have had no trouble; there may be a little bleeding at the time, but it soon stops and there is very little spitting of bloody mucus after the cases are sent to their rooms. I believe that the danger of bleeding is much less than by the old methods. In two of my cases the tonsils were large and fibrous and had large arteries; one of them spurted, but by quick manipulation the cut end was grasped and held while I completed the operation on the other side. In a little while I removed the hæmostat and there was no more hemorrhage.

I used to be afraid of it when I used the tonsillotome, but I feel perfectly safe now. If bleeding occurs the artery can easily be clamped and if necessary tied. I tried the method of Richards, of Fall River.

With the use of instruments one has to be very careful in cutting the folds of the anterior and posterior pillars, to cut them close to the tonsil; that can be accomplished by drawing the tonsil forward perpendicular to its base and then to dissect it out of its bed. In all the steps with the instrumental operation you have to see clearly and the field is interfered with by the blood. The enucleation method seems to me the only scientific one. Last year I saw and examined about two thousand school children and I had to be very careful not to report cases as needing operation where they had been operated upon before. Such was often the case on account of large portions of the tonsils having been left. If the enucleation is not used the question comes up, how much of the tonsil should be removed, a troublesome question to answer. I have heard the objection raised to it that it does not leave the capsule, but in my opinion that is not a valid objection.

E. D. BROOKS: We had an unfortunate experience in Kalamazoo in regard to tonsils. A surgeon was called in from a large city to operate upon the tonsils of a prominent citizen there and it was reported as successful, but the boy died a few minutes afterward. The whole town knew of it and everybody was scared stiff. It is impossible to convince anybody of the necessity of having tonsils removed now even if it is badly needed. It was an enucleation case

and it caused the death of the child, and now everybody is afraid of even legitimate operations. Nobody there would consent to an enucleation. I believe the operation is a proper one, but it will not do there.

A. W. PALMER: As has been said, we should thank Dr. Foster for bringing this question so forcefully to our attention. Enucleation is a moderately recent devised technique to accomplish the total extirpation of the tonsil, the importance of which procedure is becoming unanimously recognized within the last quinquennium. The necessity of such entire removal I have appreciated for several years. It was mentioned in a paper of mine in the *Medical Counselor* of 1898, and had been practiced and taught in my Ophthalmic Hospital clinic prior thereto. In operating I noticed that the upper portion, about a third, of the amygdala was prone to be left *in situ* when using the ordinary guillotine, for the removal of which I had a modified guillotine made with a diamond-shaped loop to pass up between the pillars and a vulsellum to use therewith. Shortly after I procured a Peters' tonsil-snare, which was so satisfactory that I have scarcely employed a tonsillitome since. The plica triangularis holds the tonsil *in situ* up between the faucial pillars. If this be first incised the amygdala drops downward outward or the anterior pillar retracts so that it can be grasped by the snare on the shelving posterior surface, and the gradual tightening of loop shells the gland out, virtually dissecting the gland from the pharyngeal wall. Another essential reason for incising the plica is that after so large a body as an hypertrophied tonsil is removed from between muscular bands and membranous fold—two faucial pillars and plica—whose attachments are closely approximated, these structures approximate forming a deep pocket in which mucous and particles of food may be caught and decompose—incision of plica removes bottom of pocket. Because the cases in which finger enucleation has been performed have not healed as rapidly as ordinary I prefer the old method. This is based on observation of scab and not report of patient's feelings. It seems to me that a less macerated cleaner cut surface remains for granulation after the instrumental method.

E. B. HOOKER: I shall not attempt to discuss the surgery of the tonsil before this body, because most of you do so many operations of this kind in comparison to the few that I perform in private practice that it is not likely that I can add anything of value.

Several years ago I became much interested in Dr. Watters' report of the use of vaccines, especially the typhoid vaccine. I noticed that the doses were given at intervals of three or four days and it occurred to me that we might find it an improvement to give our ordinary remedies at like intervals, not only for diseases of the tonsils, but in general diseases as well. It has long been the practice among the purists of Homœopathy to give a single dose of a medicine and not to give another one until the effect of that dose is exhausted. These men also are apt to use the high potencies and sometimes tax our credulity in

telling of the results obtained. It seemed to me that the method was right. I determined to try to demonstrate the action of our remedies upon the same principle. Instead of giving a tablet of *Mercurius 3x* or *Kali bichromicum*, for instance, every two hours, I give a single dose of eight or ten tablets and then wait for three or four days before repeating the dose. I believe better results are obtained by this method.

H. S. WEAVER: For one, I have not followed the complete enucleation of the tonsils; I use the tonsillotome. An important point is that you should not discharge the patient as cured the moment the tonsil is removed. Very frequently you will find that such patients have suffered from catarrh for a long time previous and after the tonsil is removed they will require some treatment to complete the cure. I use *Agraphis 3x* in my cases of tonsillotomy after the operation and my patients receive the greatest benefit from it. Cases in which every vestige of tissue had been removed will go on with a running cold in the head and this remedy will relieve them almost immediately. My method is to grasp the tonsil with the vulsellum forceps, draw out the tonsil and remove. I have never had any severe hemorrhage, although just before leaving home I performed this operation and found persistent bleeding from the center of the tonsil. I grasped it and did a finger enucleation, and the tonsilar bed was as dry as punk. I cannot see that enucleation is the best operation in all cases. Cases should be selected for it.

Frequent colds in the head are more often the result of adenoids than of tonsilar disease. If there is no history of previous attacks of tonsillitis and the tonsils are somewhat enlarged, I simply remove a portion of them. I do not know how much effect a tonsillectomy would have upon the internal vessels of the neck. It is possible that there might be a loosening of the tissues so as to predispose to an aneurism in the future from some sudden strain.

G. W. MACKENZIE: Why is it that at the hospital they do only tonsillotomy and advise against tonsillectomy?

H. S. WEAVER: We do a number of tonsillectomies, but usually unless tonsillectomy is indicated by a history of recurrent attacks of tonsillitis we prefer a tonsillotomy. We do the former more frequently than a few years ago. The mere fact of having large tonsils does not justify us in performing tonsillectomy. The tonsils were put in the throat for some good purpose.

G. W. MACKENZIE: The doctor did not answer my question. There is one gentleman who works under me at one hospital and also at Hahnemann, and I am quoting him. They advise against it. When he wanted to do a tonsillectomy he was told that he was not allowed to do it in the hospital.

J. R. McCLEARY: I would like to thank Dr. Foster for his paper. Just following the operation, after the enucleation, I use the high frequency current. I have been working with Dr. Diefenbach for some

time and have come to value the agent highly. I apply a high frequency, glass ball electrode to the seat of the tonsil and externally a metal electrode. I do that to produce hyperemia; it reduces pain and removes the soreness, generally left after enucleation. The application is kept up for five minutes; one or two treatments are enough. It produces hyperemia and brings to the wound an influx of white corpuscles and causes rapid healing.

H. S. WEAVER: I would like to hear from Dr. Rice.

GEO. B. RICE: I believe that all pathological tissue should be thoroughly removed. Four years ago I became interested in the enucleation method. Since that time I have been doing it almost to the exclusion of other methods. It is not absolutely applicable, however, to all cases. There are cases which you come across occasionally which you have to do with a right-angled knife. It is, however, the ideal operation for the great majority of cases. The method we employ in the hospital is to put the patient on the side, with the head hanging over the edge of the table; the mouth gag is put in place and the parts irrigated with warm alkaline solution. The operator stands in front and introduces the finger of the left hand. If there is any cut to be made I prefer to cut posteriorly first and then cut down anteriorly. Not infrequently we have fibrous pedicles left and I have found the guillotine the most convenient instrument to cut these off. I do this without looking at the throat at all, being guided by the sense of touch. If there is hemorrhage, push the tonsil back into its bed and hold it there until it stops. If we can save blood we are doing just so much towards preventing the disturbance which follows even this small operation. Immediately after the removal of the tonsil I put my finger into the bed of the tonsil and make pressure there for about three minutes. There is no need for haste; the anæsthesia will last for from seven to ten minutes and you can save loss of blood by taking this precaution. In a good many hundred cases done in this way I do not remember that there has ever been the slightest trouble from hemorrhage. Any kind of operation will occasionally cause hemorrhage. Finger enucleation, as far as I can reason it out, is not as likely to produce hemorrhage as the cutting operation, but a little tonsil tissue left there tends to keep the blood vessels open. I am talking now about operations upon children under general anæsthesia.

When it comes to adults I use a mixture of adrenalin chloride, eucaine and cocaine; 8% cocaine, 5% eucaine, in a 1 in 1,000 supracapsulin. Inject that into the anterior portion of the pillar, the middle and the base. After this is done sit the patient in a chair and stand in front; grasp the tonsil with forceps, pull it forward and then with a round-pointed knife start the dissection at the top, dividing the fibers as they appear, as the tonsil gives. It will almost pull out after a few strokes of the knife. When well started snare it off. There is very little bleeding indeed. Not more than a tablespoonful from both tonsils. The irritation is greater in adults than in children, but not be-

yond what you might expect from the exposure of so much raw surface. I do not use the finger enucleation method in adults.

A. W. PALMER: I would like to ask Dr. Brooks if the death he spoke of was not due to the status lymphaticus or to the anesthesia and not to the operation?

E. D. BROOKS: It was due to the operation and not the anesthetic.

A. E. CROSS: I hope you will pardon me for changing the trend of this discussion, but I want to call your attention to the bearing that tonsillar affections may have upon the eye, especially to diseases of the uveal tract. Two or three years ago Dr. DeSchweinitz published the results of his studies of the affect of auto-intoxications on diseases of the eye, in which he spoke particularly of tonsillitis as a possible cause of choroiditis. Only a short time ago a woman of forty-eight years came to me for a refraction examination. At this time both eyes were practically normal except for the presbyopia and a low degree of astigmatism. Some three months later she again came to me complaining of her vision in the right eye being blurred. On examination I found a central choroiditis. She gave a history of having an acute tonsillitis the preceding week and the eye trouble came on during the height of the attack. I had the opportunity of watching this case throughout its course and report it simply as a possible verification of possible cause and affect.

BURTON HASELTINE: I would like to ask Dr. Foster if the examination of the tonsillar tissue was upon selected cases or just as they came?

HAROLD FOSTER: The series of fifty cases was exactly as they came in, unselected.

BURTON HASELTINE: That is a very remarkable report. I think that the details of it should be closely scrutinized. There have been reported in literature between 1,800 and 2,000 cases of tonsils examined subsequent to removal for tubercular infection, and the result found to be about 8%. I have a record of 300 cases microscopically examined after removal, which is the largest number ever so examined for one operator I believe. They perhaps show a different result from charity hospital cases because most of them are from private practice. Only those were counted as tubercular which had the tubercular process set up in the tissue, not those showing bacilli in the crypts. You can find all sorts of infective germs within the crypts. The percentage of tubercular cases was between 6 and 7. No one that I know of has reported a higher per cent. than 10. Hence I say that Dr. Foster's record is very remarkable. The tonsillar ring is by far the most frequent port of entry of tubercular infection.

HAROLD FOSTER: The objection that the capsule is left in is unfounded. One of the strong points about enucleation is that it completely and entirely removes the capsule. In my first enucleations I sometimes found extremely small fragments of tissue left at the base. A sweep with the finger around the base enabled me to avoid this. It

is important to get every vestige of the tonsil and capsule because I found that if portions of the capsule were left the wound would not contract properly and the danger of hemorrhage is increased. I too was wondering in that fatal case spoken of by Dr. Brooks whether it was a case of status lymphaticus or whether it could be due to the peroxide of hydrogen used. I have discontinued using the knife to make an initial incision in the pillar because it prolongs the enucleation and sometimes injures the capsule and tends to make a less thorough removal. Speaking of the guillotine, I had a case this summer in a child five years old who had been operated upon twice for tonsils. I performed a finger enucleation and removed the largest tonsil I have seen in a patient of that age. I am glad to have the suggestion of the high frequency current after the operation.

E. B. HOOKER: How about adults?

HAROLD FOSTER: The tonsil enucleation is as easily done in adults as in children. I do the majority of adults under general anesthesia because I find that the cocain injection does not prevent pain that arises from pressure; it takes longer to put them under the anesthetic but a quarter grain of morphin half an hour before helps. The reason I do not use the guillotine on the base is because there is a little more risk of hemorrhage than with the snare. As to the percentage of tubercular infection, the fifty cases spoken of were consecutive cases; they were carefully stained and examined by Dr. Sayre, and 44 per cent. of them showed infection in the tonsillar tissue proper. Dr. Sheedy reports a still greater percentage; he makes the statement that 80 per cent. are tubercular.

BURTON HASELTINE: Were these cases at the Metropolitan?

HAROLD FOSTER: About one-half of them were.

BURTON HASELTINE: Were there any other signs of tuberculosis present, large glands, temperature or other clinical evidence?

HAROLD FOSTER: No, nothing of that kind present. The season may have had something to do with the findings. It was February and March of this year. Whether there was an extra lot of tubercular bacilli in these particular cases than the ordinary run, I am not prepared to say. I only know that they were not selected cases, but just as they came. Dr. Sayre is going to examine the next thousand cases.

W. H. PHILLIPS: There was very little discussion on my paper so that I can say but little more. In regard to the infection of the tonsils with tuberculosis: At the time that I was gathering data for the preparation of this paper I wrote to Dr. Haseltine as I understood he was making such examinations, and he reported about 8 per cent. as infected. I also searched the literature upon this subject and found other reports; I think Hurd, of New York, reported the examination of fifty cases. He divided them into two groups, one being where there was other signs of infection, and one where there were no such signs. Another man reported the examination of 200 cases with a considerably higher per cent. I had my own cases examined for some

time but never found a case that could be certainly put down as tubercular. A few cases were reported to me as tubercular, but when I interviewed the pathologist I found that he was not quite certain about it himself. I asked Dr. Waters, who I knew had two years ago done much work along this line, what evidence he required before he would report a tonsil as tubercular, and he replied that he had yet to see a tonsil that he could report as surely tubercular. Without the presence of giant cells or tubercular bacilli it was impossible to state positively that tubercular infection was present, and in lymphoid tissue the demonstration of these two things was a very difficult matter. It is my opinion that the vast majority of these reports are worth nothing at all.

BURTON HASELTINE: I asked the same question and requested nothing but undoubted cases to be reported in the affirmative, and that probably is the reason why my percentage is so low. I do not think we should say that such reports are entirely valueless.

Bilateral Papillitis in a Case of Cysticercus of the Medulla.—Patient, age 23, pain in head for twenty days, tinnitus, vomiting. The head was inclined forward on account of the occipital pain. The vision and the external appearance of the eyes were normal, but a bilateral papillitis was found ophthalmoscopically. Antileptic treatment was unavailing. On the forty-fourth day in the hospital he suddenly lost consciousness and died. In the angle formed by the lateral olivary prominence and the middle cerebral peduncle an almost round body was found, which turned out to be a cysticercus. The points of interest are: 1. Position of the head, double optic neuritis, vomiting, cardiac phenomena due to compression of the glossopharyngeal and pneumogastric nerves, and finally death by paralysis of the respiratory centers. 2. The histologic structure of the cysticercus. 3. The preolivary site of the cysticercus and the double papillitis. 4. The rarity of the case. —Dr. C. Pascheff, *Archives d'Ophthalmologie*.

SYMPOSIUM—X-RAY FLASH TREATMENT.

DISCUSSION.

(Papers in November, 1911, issue, pp. 412 and 416.)

DR. SCHENCK: Dr. Brooks' paper mentions two ear cases, both of suppuration. I have not treated this form of ear trouble with the X-ray flash. I have treated a few cases of otitis media catarrhalis chronica.

One was in a married lady, Mrs. U., aged 41, who suddenly developed tinnitus in the right ear last fall. There was an irregular perforation of the membrana tympani, posteriorly. Pneumomassage with inflammation of the Eustachian tubes stopped the tinnitus after three treatments and raised the hearing for whispered tones from 400 to 700 cent., and the watch from 5 to 24 cent. The tinnitus returned in a modified form ten days later, and then she was rayed six times, being given 100 flashes, 3/10ths on and 7/10ths off, at the rate of 60 per minute at 35 cent. There has been no return of tinnitus since last fall. She has been seen several times and the hearing has remained good.

A man with left-sided deafness, which was quite pronounced, was treated during the spring of 1910 with pneumomassage and inflation of the middle ear which improved his hearing from 80 cent. for whispered tones to 250 cent., but did not relieve the full feeling and discomfort from wind. He came back in October complaining of the full condition of the left ear, with tinnitus, and, in addition to the pneumomassage, he was given X-ray flashes twice a week, 110 at the rate of 60 per minute, 3/10ths on and 7/10ths off at 30 cent. By December 30th, the tinnitus and fullness had entirely disappeared and he had lost the stuffy condition in the ears. The hearing had improved during the fall from 200 to 320 cent. for whispered tones, but had not improved for the watch. Although he has had a number of colds during the winter with slight stuffiness of the left ear during each attack, this has promptly passed away as did the tinnitus. Two X-ray treatments on the return of the symptoms during May completely stopped the tinnitus.

Miss W., aged 61, was treated from March 1st to July 1st, 1910, for otitis media catarrhalis chronica with great thickening of the membrana tympani. With pneumomassage and inflation twice a week, Ars. iod. 3x and Calc. fluor. 6x, internally, the hearing for whispered tones improved from 70 cent. in the right ear to 160, and from 20 cent. in the left ear to 85, with no improvement for the watch. The hearing remained the same until she had a severe tinitus in October with pharyngitis. The hearing, however, did not greatly decline. At this time nine X-ray treatments were given, 110 flashes at 40 cent. from the tube, 3/10ths on and 7/10ths off, 60 per minute, twice a week, from October 11th to November 8th. The hearing of the right ear was then

135 cent. for whispered tones, the left 110. The hearing for the watch was 6 cent. in the right, and 2 cent. in the left, as it had been at first. An attack of la grippe in December greatly lessened her hearing, and then vibratory massage and the high frequency current were tried, which improved the hearing more than the X-ray had done.

I have used the flashes in two cases of acute iritis with adhesions. One seemed to be very promptly benefited; the other was not, so far as I could judge, benefited at all.

Three cases of acute superficial keratitis were given quite extensive treatment without benefit.

I have not treated goitres of any variety with the X-ray, nor have I had any experience in sinusitis.

I have treated a number of cases of senile cataract without having seen much improvement in the vision. Of the fifteen cases I have treated during the past two years all but one have retained their vision at the point reached after the X-ray was used. In one case, after twenty-five treatments, given twice a week, there was a very rapid increase in the lenticular haziness shortly after the X-ray treatments had ceased. It still remains in its half ripened condition.

DISCUSSION OF DR. LINNELL'S PAPER.

DR. HERBERT D. SCHENCK: Having given a short account of my use of the X-ray in various conditions, in discussing Dr. Linnell's paper I will simply confine myself to giving the type of instrument used by some of our members who are using this form of treatment.

Dr. E. J. Bissell, who says that he has secured beneficial results in corneal opacities, progressive atrophy of the optic nerve, degenerative conditions of the choroid and retina and occasionally in lens opacities, uses a 10 inch coil and a 6 inch McAlister and Wiggin tube, with Dr. Cook's flasher made by Wappler, with the patient twelve to fourteen inches from the tube. The number of flashes varies from 150 to 250 at each treatment, and the treatments are given from every other day to one in two weeks. In most cases one or two a week are given. The frequency of the flash has been one or two-tenths on and 8 or 9/10ths off, at the rate of 60 per minute.

Dr. C. Gurnee Fellows uses a 16 inch Britman coil with an acid interrupter and a 6 inch Myers tube with a 2 point contact. His flasher is a rotary cam inserted and removed from an acid solution. The patient is placed from 6 to 10 inches from the tube, and 150 to 200 flashes are given at each treatment, which are given about twice a week. The duration of the flash is 3/10ths on and 7/10ths off.

Dr. David W. Wells uses a 5 inch coil, the treatments being given 3 times a week, 200 flashes at each treatment at the rate of 60 per minute, 1/10th on and 9/10ths off, with the patient 12 inches from the tube.

Dr. William McLean reports for Dr. A. B. Norton's work as follows: That he uses a ten inch coil with a mechanical interrupter, the Cook flasher made by Wappler, and that he uses a medium hard, well

seasoned tube of the self regulating type. He uses from three to five amperes in the primary coil, and for the most part the flashes have been given 1/10th on and 9/10ths off. In most instances the interruptions have been about 30 to the minute, but they have been used as rapidly as 60. He has used from 50 to 500 interruptions each treatment, and in a few has given more than 500 interruptions in a single treatment. The cases treated have been chronic catarrhal conjunctivitis, rheumatic iritis, interstitial keratitis, ulcer cornea, macula cornea, neuro-retinitis, senile cataract. Two or three of the cases have shown a slight improvement, but the results appear to be almost negative. There has been none of the aggravation mentioned by some of the other users of this current.

Dr. C. C. Boyle uses an apparatus very like that described by Dr. McLean, but has a smaller coil. He says he is not prepared to state that there has been any improvement in any of the cases he has treated with the X-ray.

Dr. E. D. Brooks uses a Campbell tube, a Campbell 6 inch coil, with Cook's interrupter made by Wappler. The patient is seated 12 inches from the tube and is given 300 flashes. The treatment is given three times the first week, twice the second, and weekly thereafter. Flashes are given 1/10th on and 9/10ths off.

I use a 6 inch coil with a 6 inch tube of local make, name not known. There is an acid interrupter and the Cook flasher made by Wappler. The patient is seated 12 inches from the tube, and the number of flashes given is usually 150 at first and gradually increased to 200 or 210. The treatments have usually been given twice a week, and the flashes are given at 3/10ths on and 7/10ths off, at the rate of 60 per minute.

No two of these equipments are exactly alike. There is a great variation in the size of the coil used and the type of the interrupter, some being mechanical and others acid. Whether these variations in the equipment and technique make any difference in the results retained, the writer is not prepared to say. It would seem, however, that they might make considerable difference.

SOCIETIES.

THE AMERICAN HOMŒOPATHIC OPHTHALMOLOGICAL, OTOLOGICAL AND
LARYNGOLOGICAL SOCIETY.

To the Members:

Final arrangements for the 25th annual meeting are being rapidly consummated. The Fort Pitt Hotel has been selected as headquarters and meeting place for our sessions. It is one of the largest and best appointed hotels in Pittsburgh, and will be found to be comfortable and adequate in every respect. It is suggested that you make your reservations early so as to secure best accommodations.

The program is developing nicely and bids fair to be one of the best and most attractive the society has ever had. New and interesting features this year are symposiums on "Prophylaxis" and "Reported Cases." The former will be a series of discussions of unusual interest while the latter will be made up of reports of new and old operations and methods and statistical results.

Some of the titles already submitted are as follows:

"Public Measures Contributing to the Prevention of Eye, Ear, Nose and Throat Diseases."

"Professional Methods for the Prevention of Eye, Ear, Nose and Throat Diseases."

"Prophylactic Surgery of the Eye, Ear, Nose and Throat."

"Cleanliness in Surgery."

"Sinus Thrombosis."

"Surgery of the Middle Ear."

"Accessory Nasal Sinuses and Their Relation to Glaucoma."

"Pathology of Glaucoma and Pathological Demonstrations."

"Some Observations in Glaucoma as Suggested by Schrotz's Tonometer."

"Glaucoma—Cause and Cure Demonstrated in the Laboratory."

"Use of Dionin in Senile Cataract."

"Reported Cases of Cataracts."

"Right Angle Enlargement of the Lacrimal Puncture for the Prevention of Catarrhal Ectropion in Its Early Stages."

"Extirpation of the Lacrimal Sac."

"Adenoids or Troubles in Nasopharynx."

"Homœopathic Application of Tuberculin in Phlyctenular Keratitis."
"Arteritis."

"An Unusual Case of Rhinolith."

"Headaches Met by Nasal Specialists."

Begin making your plans now to attend the meeting and bring along an application from some new man for membership. Remember the date is June 17th to 21st, inclusive, and the place is Pittsburgh, Hotel Fort Pitt.

DEAN W. MYERS,
Secretary.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

(Continued from p. 113.)

(Abstracted from *Medical Record*.)

Wednesday—Third Day.

THE TECHNIQUE OF TONSILLECTOMY.—Dr. J. M. Ingersoll, of Cleveland, gave the following as the method of tonsillectomy used at the dispensary of the Lakeside Hospital: Ether was used for the anesthetic in adults as well as in children. The patient was operated upon lying on the back with the head over the end of the table. One assistant sat on the left and held the patient's head firmly with both hands. The second assistant stood on the right and held the tongue depressor with his left hand and sponges with the right. The operator sat at the end of the table with the patient directly in front of him. One tonsil was grasped with a pair of forceps and pulled toward the median line, and the mucous membrane was carefully incised down to the capsule of the tonsil. The tonsil was then carefully dissected free with its capsule from the anterior and posterior pillars, and from its attachment superiorly and somewhat inferiorly. The enucleation was completed with the snare. A gauze sponge was then packed into the fossa and held in position for two or three minutes with firm pressure. This pressure usually stopped the bleeding. If the bleeding continued the bleeding points were grasped with ordinary hemostats and twisted. If an artery large enough to spurt had been cut, it was grasped and a buried catgut ligature passed around it and tied tightly. The second tonsil was then operated on in the same way, and when all hemorrhage had been controlled an adenotomy was done if necessary.

RELATION OF THE TONSIL OPERATION TO THE SOFT PALATE AND VOICE.—Dr. G. Hudson Makuen, of Philadelphia, stated that the purpose of his paper was to discuss the causes leading to the popular belief that the removal of the tonsils injured the voice. There was no absolute standard of vocal excellence and the voice which sounded good to one might sound very differently to another. This fact accounted for the great difference of opinion now prevailing as to the effect of the tonsil operation upon the voice. The three important vocal organs considered in this connection were the soft palate, the tongue, and larynx. The soft palate was especially affected by the tonsils, and it was one of the most important of the phonatory organs, because upon its normal action the normal action of all the others depended. It had two important functions in phonation, one being a valvular function by which vocal resonance was markedly affected, and the other had been called a thyroid-tilting and cord-stretching function by which the quality and pitch of the voice were determined and regulated. This valvular action of the soft palate might be greatly interfered with by abnormally large or degenerate faucial tonsils, the large ones interfering with the motility of the depressor muscles, and the degenerate ones having somewhat the same effect by the catarrhal hypertrophies and adhesions which they engendered. Moreover, when the valve failed to close and the soft palate being limp in the oropharynx, the palatopharyngii muscles, having lost their anchorage in the vault, were quite unable to perform their thyroid-tilting and cord-stretching function, and the voice necessarily suffered as a consequence both in respect to quality and to pitch. The normal tonsil serving as it did to keep the faucial pillars apart and thus determining to some extent, at least, the direction of their forces in the act of phonation, must be beneficial to the voice rather than otherwise, and its presence might also improve the resonant quality of the voice. There were two types of abnormal tonsils, the simple hypertrophied and the degenerate types, and both types interfered with the valvular action of the soft palate, thus impairing directly the resonance of the voice, and, indirectly, its quality and pitch. A tonsil operation under these conditions was absolutely imperative in order to improve or save the voice, as well as to remove sources of general infection. The operation which should be chosen is the one that would best remove foci of infection and at the same time conserve the phonatory and articulatory functions of the neighboring organs. While complete tonsillectomy best fulfilled the first of these two indications,

it might not be the operation best adapted to the conservation of the functions of the neighboring organs, because, however well it might be done, it resulted in cicatricial contractions and adhesions in the tonsillar fossæ, which interfered with the functions of the surrounding muscles. When, therefore, the capsule was not hypertrophied and no inflammatory adhesions existed between it and the surrounding muscles, one should probably get better results so far as the phonatory functions of the palate were concerned by removing the tonsil only and leaving the capsule intact. This, of course, was the more tedious and difficult operation, and in some instances it might be an almost impossible one, but nevertheless in selected cases the procedure should be at least attempted, because it left the palate in a better functional condition. Every case should be a study in itself, and in all cases it should be a question of judgment with the operator as to whether a complete tonsillectomy should be performed or an attempt made to do an extra-capsular operation by some of the many methods which had been devised. As in so many other instances, the mistake was often made in supposing that a single operation was suitable in all cases, and one was not sufficiently governed in one's choice of methods by the conditions as they presented themselves. The sacrifice of one or more pillars of the palate should give one great concern, because the results upon the voice and speech had been in some cases not only disastrous but altogether irreparable.

THE RELATION OF ENLARGED TONSILS TO ENDOCARDITIS.—Dr. Albert C. Getchell, of Worcester, Mass., stated that of late years there had been a growing tendency to ascribe constitutional diseases, among them endocarditis, to enlarged tonsils. With the interest in the operation for a complete removal of the tonsils, this question took a practical as well as a theoretical turn. A review of the literature on diseases of the heart and diseases of children showed in general a cautious acceptance of this view. Some authors, however, stoutly maintained it, while others did not discuss it. The writer's clinical experience showed that evidence of endocarditis was not commonly found in patients who came for removal of tonsils, and he concluded from a study of the subject that enlarged tonsils in themselves did not contain the foci of disease that produced endocarditis. Therefore, the operation for their removal should not be unduly difficult nor dangerous.

PRIMARY CHANCRE OF THE TONSIL.—Dr. A. B. Thrasher, of Cincinnati, stated that syphilis must no longer be regarded as a venereal

disease. It was especially with reference to chancre of the tonsil that this was true. A singular thing was the diversity of views in reference to the comparative frequency of chancre of the tonsil. When one considered extragenital chancre the relative frequency of tonsillar lesions varied according to the different observers from 1 to 75 per cent.; also in reference to the real frequency of tonsillar chancre. Sabolotsky reported the observation of 104 tonsillar chancres in one year, while on the other hand Protzeck saw but one case in twelve years. By far the most frequent cause of tonsillar infection was the virus conveyed by kissing. Three out of the four cases falling under the observation of the writer were caused in this way. Infection had occurred from eating utensils, drinking vessels, from pipes and cigars (the cigar maker moistening the wrapper with leucic saliva), lead pencils, nails, tooth brushes, etc. The most subjective symptom has been pain in the region of the tonsil markedly more prominent than in other diseases of this region. There was no special difficulty in differential diagnosis except possibly from cancer or from tubercle or syphilis mixed. For cancer of the tonsil it was sometimes necessary to resort to the microscope and serum test to establish the diagnosis. The disease spread more rapidly when introduced through the tonsil than through any other region of the body, and secondary symptoms were usually present when the primary lesion was first discovered. However, in the early stages of tonsillar infection the serum diagnosis had not proven reliable, probably because the virus had not extended into the system from the encapsulated tonsil. The treatment was not different from that of other primary lesions. Should one, however, discover the contagion of a tonsillar infection when there was a possibility that general infection had not occurred, immediate tonsillectomy might be made with a faint hope of eradicating the local poison.

LATE SECONDARY HEMORRHAGE FOLLOWING TONSILLECTOMY.—Dr. Frederic E. Hopkins, of Springfield, Mass., reported this accident occurring in a child of nine and in a young man of 19. In one case severe hemorrhages occurred as late as the eleventh day; in the other as late as the twelfth day.

Dr. Wood, of Philadelphia, mentioned a case of late hemorrhage following seven days after operation for adenoids, being so severe as to require etherization and packing of the vault.

Dr. Richards, of Fall River, added to the list two cases of late hemorrhage, occurring in one case five days after operation, in the other

six days after operation. He also mentioned a fatal case of late hemorrhage following an adenoidectomy. In discussion of Dr. Makuen's paper he took exception to the author's statement that because there was a large hole on one side of the palate and not on the other side it was indicative of a poor operation, for sometimes the supratonsillar fossa was higher on one side than on the other.

Dr. Casselberry, of Chicago, referred to the cause of late hemorrhage, and stated that in almost every case it was due to the separation of a slough, the result of the operation. He advocated the use of the clamp under these circumstances, having always had very good results from its use; and also mentioned that in operations in his office upon adults, if hemorrhage occurred, he immediately applied the galvanocautery to the bleeding point, and had found this measure most efficient in controlling the bleeding.

Dr. Richardson, of Washington, D. C., stated that many times cases were referred to the specialist by the general practitioner for removal of tuberculous or otherwise diseased tonsils, when the specialist could find no evidence of any disease, and he considered that the time had come to refuse to operate on any tonsil until it could be proven microscopically, or possibly macroscopically in some instances, to be diseased. He referred to the many complications which followed tonsillectomies, viz., emphysema, pneumonia, and pleurisy, mentioning one case of a child in which the latter condition developed and ended fatally.

Dr. Kyle, of Philadelphia, advocated, in cases of enlarged tonsils when the patient was otherwise healthy and no definite disease of the organ could be demonstrated, the loosening of the tonsil from the existing adhesions, without cutting the connective tissue in the soft palate or the anterior or posterior pillars; he reported satisfactory results after this procedure. In making a diagnosis with regard to the tonsil he urged that the operator should satisfy himself that the condition was not the result of some systemic upset before performing a tonsillectomy. He considered that the size of the tonsil had little to do with its dangers, as a small tonsil could be just as great a menace at times as an enlarged one. In discussion of Dr. Makuen's paper he mentioned the fact that in irregularities of the palate the individual adapted himself to the condition by twisting his mouth in such a way as to overcome the liability of making a false sound, and said he had frequently noticed this in singers.

Dr. Coolidge, of Boston, in discussing Dr. Thrasher's paper, re-

ported briefly a case of primary chancre of the tonsil in which treatment with 606 was begun just as the secondary manifestations began to appear. The chancre disappeared rapidly and the secondary eruption also disappeared, and in a week or so the patient seemed fully recovered. With regard to the question of tonsils, he believed that it was unfair to the specialist for the general practitioner to expect him to make a diagnosis from the appearances of the tonsil alone, but that he should always insist upon hearing the whole history before giving his ultimatum.

Dr. Delevan, of New York, referred to the fact that the removal of the tonsils was probably one of the earliest operations known to man, and the fact that for many generations it was abandoned rather pointed to the belief that there must have been some good cause for this step, and he urged caution in returning to tonsillectomy as a routine practice, considering that each individual case required separate study. He condemned the practice, which he stated to be quite prevalent, of practitioners, in other lines of work, such as gynecology and pediatrics, undertaking the removal of tonsils.

THE EFFECT OF THE CAUTERY ON TUBERCULOUS LESIONS.—Dr. George B. Wood, of Philadelphia, stated that clinical experience and experimentation on guinea-pigs showed that the cautery was an almost ideal method of treating localized tuberculosis. It was shown that there existed a retarding influence on the spread of the disease beyond the area actually destroyed by the heat. Within three days a marked zone of inflammatory reaction was found just outside of the cauterized area and in this zone an excessive amount of fibrous tissue developed. The development of this fibrous tissue had a marked influence on the limiting of the tuberculous disease. Formation of new blood vessels in the inflammatory zone brought sufficient nutrition to the part to keep it from breaking down and becoming necrotic, while the eschar produced by the burning prevented reinoculation and sealed the lymphatics and blood vessels.

Dr. Getchell, of Worcester, Mass., considered that if the constitutional disease was active the local treatment should be of the mildest nature, but if the constitutional treatment was in abeyance and the general condition of the patient good, while the local lesion was of a sluggish character, stimulating treatment was a proper procedure.

Dr. Richards, of Fall River, stated that at first he had held the opinion voiced by Dr. Getchell, but to his surprise the reaction after the

electric treatment in these cases was much less than that following other methods, while the results were much more rapid and satisfactory.

CONGENITAL WEB OF THE ESOPHAGUS: REPORT OF A CASE.—Dr. J. Payson Clark, of Boston, reported the following case: A woman, aged 24, had always been obliged to mince her food in order to swallow it. There was no history of trauma. A year before he saw her she had had a choking attack following an attempt to swallow a piece of meat. Since then she could swallow only liquids. She was well developed and nourished. Attempts to pass bougies failed. Under ether anesthesia examination with Jackson's tube spatula revealed a membrane shutting off the esophagus from the pharynx except for an opening 3 to 5 mm. in diameter. On attempting to place this membrane on the stretch with an esophagoscope it gave way and the instrument passed on to the stomach without meeting further abnormality. The patient had no further difficulty in swallowing. This case was apparently unique as no report of a similar one could be found in the literature.

Dr. Mosher, of Boston, reported a case of complete web of the esophagus, in which examination showed a thin diaphragm at the upper end of the esophagus; after evulsion of the same the symptoms, which had persisted for fifteen years, disappeared. He considered that probably on careful examination it would be found that many cases attributed to nervous affections were in reality the result of slight webs in the upper part of the esophagus.

Dr. Swain, of New Haven, referred to a case which he believed to be of this variety, but in which the patient passed from under his care before a definite diagnosis could be made.

HOMEOPATHIC MATERIA MEDICA AND THERAPEUTICS.

NOSE AND THROAT REMEDIES (SELDOM USED).

A. WORRELL PALMER, M. D.,

New York, N. Y.

Alumina.—All the characteristic symptoms of the nose and throat given by Dr. Timothy F. Allen in his lectures are the subjective symptoms observed in a majority of ethmo-frontal or ethmo-sphenoidal disease. The *Century* gives the following general indications for this remedy: "Dryness, numbness and weakness are three of the most important symptoms in the symptomatology of alumina. Patients are worse in a dark room, in bed, in evening and during rest. Alumina patients are spare, thin, dark complexioned. Some of the indications calling for alumina are apt to be found in girls at the age of puberty."

Reasoning from the above we conclude that it should be beneficial in many of our sinus cases.

Kaolin in the lower triturations is a valuable remedy in croup and bronchitis. There is soreness of the chest along the trachea, cannot stand percussion. Capillary bronchitis.

Hepatica is to be remembered in pharyngeal catarrh with profuse serous sputa and hoarseness. Tickling in the throat, hawking; sensation as if particles of food remain in throat.

Eriodictyon (Yerba Santa).—In bronchitis, pharyngeal catarrh, constant hawking, pressure under sternum as of a heavy weight, necessitating a deep breath at times. Sharp in right lung. Cough is irritating and attended with expectoration of glairy mucus. Use mother tincture, drop doses.

Æsculus.—Coughs depending on hepatic disorder with hot feeling in chest. Throat very sensitive to inspired air.

Grindelia.—The cough at first is dry and wheezing without expectoration and asthmatic. Patient fears going to sleep on account of loss of breath which awakens him.

Afraids.—"To be alone, Lycop.

"To go home in the dark, Caust.

"Of death, Acon.

"Of ghosts, Hydr.

"Of hobgoblins, Lach.

"Of salvation, Sulph."—*The Hahn*.

Nitric acid.—CASE 1.—A girl some seven or eight years of age was troubled for a year or two with conjunctivitis of both eyes, which at times became so violent as to produce inflammation and ulceration of

the cornea, which permanently injured to some extent the sight of her eyes. Concluding that the acrid condition of the secretion was the fundamental cause of the inflammation and the girl having been troubled for a long time with nocturnal enuresis, I decided to prescribe kreosote. She improved for a time, but to complete the cure gave her nitric acid. Under this remedy the inflammation entirely disappeared and the enuresis was permanently cured.

CASE 2.—Self. For two years or more I have been having trouble with my eyes. The lids were more or less inflamed as well as the conjunctivæ, sensitiveness to light with an inclination to squint or close the eyes often, with increased lacrimation and at times obscuration of sight. I was treated for some time by two different oculists without permanent relief. I was also troubled with a chronic dysentery that manifested itself more or less for many years, especially after eating fruit of almost any kind. A raw apple or a drink of lemonade would frequently excite an attack of diarrhœa followed by dysentery unless prompt measures were taken. I concluded that there was an acrid condition of the secretions and took nitric acid. My eyes soon began to improve both in comfort and in general appearance. The irritability of the rectum disappeared and has given but little trouble since. My eyes still require a few doses of the remedy occasionally and probably the rectum will also, but it has certainly been very helpful to both of them.—*Dr. T. . Merryman, Iowa Hom. Jour.*

Salvarsan—606—is going to have the same experience as all other previous drugs or methods which are borrowed by the Esculapian experimenting promoters. Shortly this will surplant Quinine for Malaria. Iversen and Tuschinski, in the *Deutsche Med. Wochenschrift*, in experiments on 61 patients, report curing in 12 to 48 hours all forms of malaria, excepting one particular ring-shaped malaria parasite, which temporarily diminishes, but subsequently greatly multiplies.

JOURNAL CLINIC.

Glaucoma, Subconjunctival Injections of Sodium Citrate in.—I have used 5 per cent. solutions in both hospital and private practice for the past four months, and my results would indicate that its sphere of usefulness is confined to cases which had previously been *operated* upon with lack of success. Under such circumstances I have been uniformly successful in reducing the tension, even in a case of intraocular hemorrhage following an iridectomy.

When used as an initial measure it has failed in each instance.

C. H. HELFRICH, M. D.

Snuffing Solution.—The procedure of, into or through the nose, as is so commonly done by the laity and even occasionally suggested or advised by their physicians, can not be too strongly opposed. Analyze what is done by snuffing. Of course, the main force of suction is performed by the lung, but in preventing the liquid going in the larynx and to augment the force, the pharyngeal walls are slightly dilated,—but on the stretch,—which naturally dilates the mouth of the Eustachian tube, as it is in the dilating fibres of the pharyngeal muscles. Furthermore, the orifice being on the level of the nasal floor a considerable impact of the inflowing solution strikes the dilated mouth of the Eustachian. And the customary repetition of the act forces a few drops of solution into the Eustachian tube to the detriment of it and the middle meatus.

Cotton pledgets placed in the anterior nares following operation is the most common procedure employed with the direction that patient remove and replace fresh one as soon as soiled. Experience teaches us that too strict precaution can not be given the patient regarding both keeping the absorbent cotton clean; and cleansing the hands before handling the cotton, otherwise, the operative wound is prone to become infected.

Glaucoma. Subconjunctival injection of $4\frac{1}{2}$ per cent. sodium citrate solution was found effective in three severe cases. Return of intraocular tension to normal in 12 hours. Aspirin internally and myotics locally also used. *Heller.*

BOOK REVIEWS.

DIRECT LARYNGOSCOPY, BRONCHOSCOPY AND ŒSOPHAGOSCOPY. By DR. W. BRUNINGS, of Jena. Translated and edited by W. G. HOWARTH, M. A., M. B., B. C., Camb.; F. R. C. S., Eng., Surgeon in charge of The Throat Department at St. Thomas' Hospital and the Queen's Hospital for Children; Surgeon, Laryngologist to the City of London Hospital for Diseases of the Chest, etc., etc. Illustrated by 114 engravings and 26 full-page plates. Octavo, 384 pages. Published by William Wood & Company, New York, N. Y. 1912. Price, \$5.00, net; muslin bound.

A comprehensive and exact presentation of this comparatively new method of examination and operating is this volume; written by one of the most, if not the most competent and practical teacher and operator. It is a combination of the technical and clinical presentations of this increasingly important group of procedures.

On account of Dr. Killian's visit to America a few years ago we Americans naturally associate the development of these procedures with Prof. Killian; on the Continent we understand the latter and the author enjoy equal reputations. Dr. Brünings' "Handbuch für die Technik und Methodik der direkten Okularen Methoden," although only published the early part of 1910, is considered a standard textbook. This volume is a revision of the Handbuch, omitting considerable of the therapy and adding much to the chapters on clinical application, which changes were to a great extent due to the judicious suggestion of the translator. Perusal verifies that the author carried out the intent of his remark in the preface,—“experience in my endoscopic classes has convinced me that the written description must include the most elementary details, if it is any way to replace personal instruction.” This is a cardinal factor in favor of this as of any book or treatise written on such lines.

Dr. Howarth has couched the work in the most presentable and readable phraseology. And the publishers, Wm. Wood & Co., have produced it in excellent style, including paper, printing and illustrating. The reproductions of X-ray plates are the best we have seen on paper.

It is a book that every progressive laryngologist needs to read and study.

MERCK'S MANUAL OF THE MATERIA MEDICA. (*Fourth Edition.*) A Ready Reference Pocket Book for the Physician and Surgeon. Containing a comprehensive list of Chemicals and Drugs—not confined to Merck's—with their synonyms, solubilities, physiological effects, therapeutic uses, doses, incompatibles, antidotes, etc.; a collection of Prescription Formulas, Poisoning and its Treatment; and an ex-

tensive Dose Table. Merck & Co., 45 Park Place, New York, 1911. 493 pages. Sent on receipt of forwarding charges of 10 cents.

THE CARE, FEEDING AND HOMŒOPATHIC TREATMENT OF CHILDREN.
By WILLIAM BOERICKE, M. D., Professor of Materia Medica and Therapeutics at the Hahnemann Hospital College of San Francisco; Author of "A Compend of the Principles of Homœopathy," "Manual of Materia Medica," etc. *Second Edition.* Boericke & Runyon Company, San Francisco. 1911.

The author says his book is for the young mothers, but perusal leads us to believe all old or experienced mothers could learn from it a great deal for the benefit of the rising generation. Lucid directions for the care of the child at birth comprise the first chapter. Minute instructions for feeding include the care of mother to produce the most normal lactation, as also artificial feeding.

Finally the many different ailments to which the cunning but unfortunate little imp is heir to are briefly but clearly described, each followed by the adapted local measures and a few homœopathic remedies useful in the earlier stages.

Of the many books for the family's use, and we think we have glanced over about all, this seems to give just about enough medication, and that in a comprehensible style.

The Journal of Ophthalmology, Otology and Laryngology

Vol. XVIII

Lancaster, Pa., and New York, May, 1912

No. 5

EDITORIAL.

TITANICISM.

IN this progressive time-saving age, if it is not actually detrimental to the general welfare (as in the present instance of authography), may it not be admissible to coin a word like the above title. On account of the world-wide interest in the late terrible disaster—perusal of comments, etc.—it is scarcely necessary to define the above term as meaning “speed mania and ostentation or spectacularism.”

The New York *Medical Journal* of April 27th contains an excellent, but caustic, editorial on “Speed Mania and Prophylaxis,” from which we quote: “In the staterooms the decorations on this craft went to the extent of artificial grate fires. * * * Suites of apartment staterooms were sold at over \$4,000 for the trip, occupying space that might have been devoted to life boats, if this was lacking elsewhere.

“This top-heavy monument to crude color and semi-art went to the bottom in an endeavor to make her unwieldy bulk rival her slim sisters in speed. The tragedy is unique only in its suddenness; not a day passes in this city without the sacrifice of a life to an over-driven automobile, scarcely a month its tribute of lives to an eighteen-hour train.”

The writer then asks what would happen if by some mistake or some trifling oversight enough cholera or plague germs to cover the head of a pin obtained entrance to the city? “Suppose then,” he says, “as many as fifteen hundred lives were lost before the authorities got control of these pullulating agents? What an outcry, what cursing of the physicians, what denunciation of experimental physiology, what criticism of the Health Department!”

The editorial philosophically concludes:—

“People willingly trade life for excitement. Every gain in the speed

takes its certain toll. From the Roman chariot race, through steam engine, automobile and aeroplane, the death rate has constantly risen in proportion. * * * Not for long will the people be satisfied with the ample supply of life boats and the moderation of speed among the icebergs. Soon the cry will be for more steam, for another hour off the record, and the company that heeds the appeal first will reap the harvest in dollars and pay out again the price in lives."

The above editorial comparison portrays the better and ordinarily true aspect of our time-honored chosen profession—and proud are we that this is the case—Dr. Lydson's "Chaos and Crime" notwithstanding. But lest the reader consider that we take a too optimistic view of the situation we feel compelled to mention a few specific procedures, apparently indicating that our profession is becoming infected by the speed mania, etc., microbe. Those so infected are pleased to consider themselves the "progressives" in the profession. How could it be otherwise when we—the M. D.'s—are surrounded with an atmosphere so heavily laden with this speed cocci?

Several operators aim to discharge herniotomies from hospitals in ten to twelve days; radical mastoid cases, in seven or ten days; appendectomies, in five to seven days. A New York surgeon of national reputation informed us that such practice is detrimental in a majority of herniotomies; three weeks the least they should be restricted to quietude in a recumbent position. The writer has personally noticed that quickly discharged mastoidectomies apparently require longer to *perfectly* heal than others, and reliable and competent observers have noticed rapidly discharged appendectomy patients apparently become life invalids from such haste.

As spectacular may be mentioned inferior turbinectomies (total removals), temporarily followed by their exceedingly pleasing and satisfying sensational results, productive of such gratitude on part of patient and reputation for the operator—do these yield the best final physical results? The English rhinologists had this specific *mania* about 1890 to 1900, advocating the use of the Carmalt Jones' spoke shave, but about the later date it was abandoned after observation of results in about 11,000 cases demonstrated that ozæna finally supervened in the majority of cases.

The synchronous operating on several parts of the nares, especially where the upper zone is invaded, is often a dangerous time-saving procedure on account of overtaxing the lymphatics which empty into intra-cranial trunks, thereby predisposing to peri-cerebral infection.

Another hazardous time-saving custom, especially as we are now commencing to appreciate status lymphaticus with its fatal results, is the meagre or total lack of pre- and post-operative care of either tonsil and adenectomy cases.

As another efficient assistant to the JOURNAL Staff the editors take pleasure in introducing Dr. William O. McLean, who will, in conjunction with Dr. Nagle, assume the supervision of the Department of Abstracts. Dr. McLean graduated from the New York Ophthalmic Hospital in 1907, and his practical experience in the almost exclusive charge of Dr. A. B. Norton's clinic in that hospital since that date, as also assisting him in his private practice, coupled with the energetic manner with which the doctor has taken hold of his work, we feel assured will markedly improve the tone of this department of our JOURNAL.

ELECTRICITY IN EYE PRACTICE.*

W. FRANKLIN BAKER, M. D.,

Philadelphia, Pa.

THAT the subject of electricity in ophthalmic practice has received scant attention appears from a statement by the secretary of this section, Dr. Bulson: "For several years the subject has received no consideration." In 1898 Dr. Starkey read a paper on "The Use of Galvanism in Pterygium," and LeMend on "The Value of Faradism in Choroiditis." Since then nothing has been presented except some papers on the galvanic cautery and the magnet.

It is probably safe to say that there is no remedy which causes so varied physiologic manifestations and therapeutic results as electricity. By proper selection (of modality, current strength, tension, polarity, length and frequency of application, etc.), stimulation or sedation of the nervous and vasomotor systems, muscular contraction, decomposition and destruction of tissue, changes in nutrition, and so forth, may be produced. This "proper selection" requires a fair working knowledge of the physics and electro-therapeutics of the agent.

Of all modalities, galvanism furnishes the greatest variety of useful application to the eye as well as the rest of the organism, while, with the possible exception of radiotherapy, it requires the most skill for its safe and successful administration.

For the most part I have used electricity in chronic cases which are very intractable or usually considered not amenable to medication. In order that results may be properly referred to the current, the diagnosis, when possible, has been confirmed by confreres, other treatment avoided, and in several instances patients had been treated without success by the usual approved methods for long periods.

A word in regard to the nature and selection of the current used and the technique of its application.

Previous to 1890 the galvanic battery of zinc-carbon elements, excited by a solution of potassium bichromate, was used, and since then the Edison street current, controlled and measured by the rheostat and meter of the ordinary wall plate.

*Read before the Pennsylvania Society of Physical Therapeutics.

The alternating or sinusoidal current has been taken from a No. 2 Victor transformer, using from 30 to 35 measured volts, and a quantity estimated at 5 milliamperes. As the heat meter is not applicable to so small a quantity, it was thus estimated: With a force of 30 volts taken from the direct current, and the electrodes placed on the lids and the nape of the neck, the meter registered 5 ma., hence with the same voltage from the alternating current and the same resistance the current is 5 ma.

Since the exposure of the eye to the static, high frequency, X-ray or Faradic current causes no phosphores, such currents probably have very secondary if any value in optic atrophy. The technique is as follows except when otherwise stated: Galvanism is generally applied with a large positive pad, 3x4 inches (to prevent smarting), to the nape of the neck, and the negative pads to the closed lids for ten minutes daily, with a current of from 5 to 10 ma., generally the latter. The electrodes of the sinusoidal are similarly placed and from 30 to 35 volts, as can be tolerated, used for ten minutes daily.

This splendid showing obtained by Coleman must convince the most skeptical that electricity has some virtues. The physiological action of electricity is wrapped in more or less obscurity; it very much resembles the medicines we classify as alteratives. In the migration changes that take place, the cells are stimulated to increased energy and regeneration. Leduc, of Nantes, has demonstrated the migration of ions through the tissues, and is of the opinion that the effects of electricity are due to redistribution of the ions. E. G. Morton states that there seems to be no doubt that some arrangement of molecules does not take place in the tissues, and may be largely responsible for the effects of electrical treatment.

Rockwell conducted experiments on the effects of electricity on the general nutrition, and found that young dogs treated by general Faradization gained weight more quickly and became perceptibly thinner than others of the same litter not so treated but brought up under exactly similar conditions; others have found that if the muscles of, say one leg be treated regularly for three or four weeks by electrical methods they become larger and heavier than the opposite leg.

Electricity is not specific, but that it possesses power to increase nutrition, to increase excretion of waste matter and cause local anæsthesia can be readily demonstrated, for example: Examine the optic disc before an electrical treatment and then again after the treatment,

and you will be surprised at the ruddy color of the nerve head, even to the point of obscuring the view of the same; or palpate an eye with a plus tension and note the marked reduction in tension after massage of the eye. The optic nerve is very sensitive to electrical currents. (For proper stimulation of the optic nerve, the indifferent electrode should be placed at the back of the neck and the active electrode on the eyeball.) It is important that we use only the weakest current possible as too strong a current may cause damage to the retina.

The anode (or positive) pole has the following power: (1) Anæsthetic, (2) sedative, (3) hemostatic; it is less destructive than the cathode. The cathode (or negative) pole acts as (1) a stimulant, (2) quickens absorption, (3) increases moisture, (4) dilates blood vessels and lymphatics.

Sufficient has been said, however, to impress upon the reader the importance of electrical and physical methods in promoting absorption and hastening the elimination of waste products by improving the nutrition of the spinal nerve centers on the one hand, and the general increased metabolism on the other.

One need not possess the great array of physical and electrical apparatus mentioned in this article to treat these cases of auto-intoxication, for much may be accomplished by having and becoming familiar with the real therapeutic value of either a good vibrator, static machine, high frequency apparatus, or direct or induced current outfit, any one of which may become invaluable in the hands of a competent operator.

The three things that go to make up a complete light treatment or phototherapy are the heat, light and chemical rays which are simply different rates of vibration. Sound, which is a lower rate of vibration, we do not regard of therapeutic value, but as vibration increases in frequency and decreases in length we get the heat rays, then light (the visible spectrum) until finally we enter the region of the invisible (the ultraviolet), and beyond this the X-ray. Light, heat and chemical energy constitute the trinity of phototherapy. These combined effects are undoubtedly represented best by the rays of the sun which, when concentrated, act more powerfully than those from any artificial source, but for obvious reasons their general and successful utilization is impracticable.

The two available artificial sources of this method of treatment are the incandescent lamp and the arc light, either of which are superior in both physiological and therapeutic efforts to the ordinary hot air bath,

for the reason that the latter is more depressing and far less penetrating than the radiant heat, and is without chemical activity. In the administration of light energy, one should bear in mind an important fundamental principle, viz., that resistance develops energy, a principle as striking on its moral and intellectual side as on its physical. Electricity, for example, is of value, therapeutically, only as it meets with resistance, and in the same way light cures disease, only as it meets the human body, and is transformed into radiant energy. The rays from a powerful incandescent or arc light readily penetrate the skin, but in overcoming the deeper and denser structures are converted into heat. Heat, therefore, is one of the principal therapeutic factors in the use of the electric light.

1425 Spruce Street.

Cholera is carried by the fecal and vomited matter of a person having this disease and by any substance soiled by such discharges; particularly the hands and clothing of the sick person; the hands of persons attending the sick; the toilet seats or receptacles used by the sick; by flies which come in contact with such discharges then soil the exposed foods with germs. Water once contaminated by cholera germs may retain and distribute such infection for many weeks.

To avoid any danger of cholera do everything possible to assure complete isolation and quarantine of the sick and suspected by competent authority and attendants. See that every trace of fecal discharge or vomit or matter soiled by them is completely destroyed or disinfected immediately.

Permit no flies in the sick room or quarantined quarter.

Destroy all food that has approached any such sick person and permit no exit of anything whatever from quarantine quarters until its complete disinfection is assured. Eat no raw food and boil all water used for cooking or drinking. Eat no cold food, unless absolutely assured of its previous thorough cooking.

Wash hands and face frequently with soap and water; and always before eating; always after the use of the toilet and always when anything or person possibly soiled has been touched by the hands.

The germs of cholera will cause no harm if not put into your mouth.

Bacteriological examinations make the rapid, exact diagnosis of cholera. These alone can discover the cholera carrier and these alone determine the length of quarantine requisite. Bacteriological control is imperative in diagnosis of every case of suspected cholera, and its quarantine and liberation therefrom.—July Bull. N. Y. S. Dept. Health.

REMOVAL OF TONSILS.*

J. M. PATTERSON, M. D.,

Kansas City, Mo.

IN this short paper I shall consider *when* to remove tonsils, and not *how* to remove them, except to insist upon their complete enucleation after a decision to operate is reached. The question is so often put to me by physicians, "When should tonsils be removed?" that I have decided to put my answer in print.

The exact function of the tonsil is not known, therefore, if a tonsil is healthy and gives no trouble, do not bother it. But when a tonsil is diseased its function is gone, and certainly no harm can come from its removal, after a reasonable effort to restore it to a normal condition with remedies and local treatment has failed.

It has not been shown that complete removal of diseased tonsils has ever had any deleterious effects on the future health or happiness of the patient; on the contrary, their removal has many, many times been followed by positive and permanent benefit.

It is a well established fact that rheumatic fever, acute endocarditis, pulmonary gangrene and other infective conditions often have their initial lesions in the tonsils. Enlarged tonsils that give no symptoms should not be operated, unless at same time the patient has adenoids which interfere with breathing, or the function of the Eustachian tube is impaired.

In most cases where the tonsils were enlarged, and an anæsthetic was given for their removal, and I have not at same time removed the tonsils, I have regretted it afterwards, because most tonsils that are enlarged sooner or later show evidences of infection. I would advise their removal in any patient suffering from ear symptoms.

Ordinarily I would not insist upon the removal of tonsils in a patient under five years of age. Still I should not hesitate to do so if the child had recurring attacks of tonsillitis with dullness of hearing. In many of these cases, however, the removal of adenoids alone will clear the ear symptoms. The tonsils should always be enucleated in those patients who are subject to recurring attacks of peritonsillitis—quinsy.

*Read at Missouri State Society, April, 1912.

The same can be said of those patients subject to attacks of rheumatism who have diseased tonsils.

In speaking of diseased tonsils, do not lose sight of the fact that many of the diseased tonsils that do the most harm are but slightly, if at all, enlarged. Many tonsils do not appear enlarged upon a casual look that are found to be decidedly so upon a thorough examination. These belong to a class known as submerged tonsils, and frequently give the most trouble.

There are also many diseased tonsils that should be removed that are not even moderately enlarged. They are often found filled with foul masses in the crypts, and are no doubt sources of infection to the general system. It is this class of tonsils that cause a large per cent. of the bad breath complained of by the patient and his intimate friends.

I believe removal of tonsils, when indicated, can result in nothing but good to the patient, if the proper precautions, used in all such major surgical operations, are insisted upon.

518 Bryant Building.

Operations for Cataract Upon the Eyes of the Very Aged.

DR. GEORGE F. KEIPER, La Fayette, Ind.

Abstract: Age a relative term: Some old at forty, and some young at ninety years of age.

Precautions are to be taken in operating upon the very aged.

- (1) A very careful eye examination.
- (2) A very careful and complete physical examination extending over several days, of fairly constant observation.
- (3) Preliminary iridectomy seems to be indicated in every case.
- (4) Keep the patient upright at all times possible. Thus avoid hypostatic congestion of the lungs.
- (5) Keep unbandaged the eye not operated upon.
- (6) Most rigidly must all preparations conform to all that aseptic surgery commands.

Report of two cataract cases, ninety and one hundred and one years of age, respectively. Lessons to be drawn from these cases. Experience of other operators along this line.

SORE THROAT IN CHICAGO, 1911-1912.

GEORGE M. MCBEAN, M. D.,

Chicago, Ill.

THE prevalent sore throat in Chicago this season has been especially characterized by the accompanying cervical adenitis which has frequently gone on to suppuration; by the numerous cases of quinsy in which it has been difficult to locate pus, some of them apparently subsiding without discharging, and by the tendency of the various infections toward chronicity.

Smears have shown under the microscope almost nothing but pneumococci, but cultures show long streptococci. W. Henry Wilson says, "Chains long enough to tie a dog with."

The infections have been very contagious. When once it starts in a house, unless strict isolation is observed it spreads all over, and the patients who were first infected become reinfecting from the later ones. I think this is more due to the extreme severity of the winter here, with the lack of ventilation in houses and cars and the general carelessness in regard to keeping the feet dry, than to any special virulence of the germ.

It may sound like blowing our horn too loud, but I have not seen a single case of adenitis go on to suppuration if under homœopathic treatment from the start, while our regular friends are developing them every day. One patient under the care of a very prominent surgeon and an equally prominent laryngologist was in the hospital for a month with absolutely no treatment except an ice bag or a hot water bag on alternate days, depending on which attendant saw her last. Finally her homœopathic nurse smuggled in some arsenic iodide and she promptly got well. Of course that was only a coincidence.

There seems to be much difference of opinion in regard to operating these cervical adenitis cases. Some are allowed to go on to suppuration and are not drained, others are drained, and still others are operated by the open method and the glands dissected out. But, as I said, the homœopaths are in luck this year, or perhaps I should call us "therapeutic specialists" in distinction to our friends the "therapeutic nihilists."

I have treated the cases by swabbing out the throat and nasopharynx

several times a day with argyrol, 20 per cent. If the patient can not treat his own nasopharynx I have him lie down and drop the medicine through the nose, allowing it to run back into the pharynx. When the acute symptoms are past I apply Loeffler's solution in the tonsil crypts every second day. During the acute symptoms I use the leucodescent lamp at frequent intervals every day.

As in many of these cases there is a leucopenia due to exhaustion, I frequently use protonuclein in doses of four tablets every two hours. In a few cases where prostration was extreme I have used injections of sodium cacodylate (clin), gr. $1\frac{1}{2}$ per day.

Internally, the homœopathic remedies that have served me best are belladonna 2x, phytolacca in large doses of the mother tincture, actea racemosa, also in mother tincture, mercury biniodide 2x tablets, dissolved in mouth for its antiseptic effect as well as its constitutional, and arsenic iodide 2x to finish up the case.

I have put my patients to bed and fed them to the limit of their capacity on milk and egg-nogs.

815 Marshall Field Building.

Lactic Acid for Chronic Suppurative Otitis Media. It does not penetrate deeply enough for good results in cases of "fibrous vegetations." But Lange paints the meatus with 40 per cent. lactic acid for frequently relapsing acute inflammation of the auditory meatus with good results. —*Therap. Monatsch.*, 1906, No. 12.

Antipyrine Amaurosis has been induced by 130 grains taken in 48 hours.—*J. A. M. A.*, 1906, p. 153.

Grief is a form of self-indulgence, and it should be bridled much oftener than it is.

OPTIMISM VS. PESSIMISM.

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IF mental therapy has a claim upon me I see no reason why physicians should not absorb and apply as much optimism as possible. We are often told how the very presence of a doctor is a relief to a sick patient, and how teeth stop aching in the presence of the dentist; why should a physician not encourage his patient, first, when it is the truth and in line with his belief, and second, when it is for the benefit of the patient, with nothing to be gained by taking away his hope?

I remember a few years ago a young doctor who told every patient who came to him that he had been called at just the right moment, that another day might have meant pneumonia, typhoid or some other serious disease; he allowed it to be implied that he could abort these things and that he was a great doctor. I think he came to be a good doctor in time and, although we do not want to trade upon the credulity of our patients, I see no reason why we should not be optimistic whenever it is consistent with the facts in the case.

I was told in the early years of my practice that it was a very good thing not to take a case that presented an unfavorable prognosis, for success would bring other patients and failure, although expected, would be detrimental to a growing reputation; all of which may be true. It is just as true that charity patients are less lucrative than pay patients, and it could be easily foretold that a man would have more money if he took only pay patients. There are few doctors however who do not, for humanity's sake, take both charity patients and hopeless cases, and out of both comes perhaps as much satisfaction as could be gained from continued success and the accumulation of dollars.

I have always felt that it was rather cowardly not to take cases and attempts to do one's best, if not to try for the seemingly impossible, with from time to time unexpectedly good results.

As, for instance, a case of sympathetic ophthalmia with disastrous results and fourteen years of blindness was offered no hope but a willingness to attempt anything for improvement, with the result that operation opened an occluded pupil, absorbed an opaque lens and gave a great increase in the amount of vision—a result due to optimistic

hope as compared with much pessimistic advice from physicians who feared and expected failure.

Another phase of the difference between the man who looks for the best and the one always looking for the worst is illustrated by a case of detachment of the retina which occurred in a man of forty, ten or fifteen years ago, with cause apparently unknown and of course an unfavorable prognosis. High class consultants feared hemorrhage, melanotic sarcoma extending to the other eye, and all sorts of gloomy disasters. Rest in bed, with pilocarpine sweats, six weeks of idleness for unknown results were advised, but both patient and his attendant oculist took the chances of a day, and a week, and a month, to see whether the worst had not already happened, and these added years have proved that nothing has happened, that hospital treatment could not have done more, that the sarcoma has not developed and that the patient, with his one-half vision in that eye and good vision in the other has been able to attend to his business and do all that a man could be expected to do.

A very recent case of retinitis in one eye was given a very unfavorable prognosis. The demand was made for hospital treatment with sweats and continued drastic treatment. My diagnosis was retinitis which had probably seen its worst stages with the danger measurably past. Expectant treatment, the best I could offer, was given and the patient was allowed to come and go as an office visitor. Nothing happened to mar an uneventful recovery, except the loss of a portion of the field of vision. An eye strain was corrected by the prescription of lenses.

In other words, cases of this kind in which blood and urine analysis, blood pressure, etc., are all negative, can often be controlled by mild means, and the results obtained will be far more satisfactory to the patient because of the avoidance of severer methods suggested.

Such happy results may not always follow, but why not look for the best instead of the worst? Why not expect results and work for them? We may often be surprised and gratified at the favorable termination.

22 E. Washington Street.

DISEASES OF MUCOUS MEMBRANE OF THE NOSE.*

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BEFORE going into the pathology of the nasal mucous surfaces, a brief review of the gross anatomy is essential. The external nose is the arch-shaped framework, bony above and cartilaginous below, covered externally by integument and internally with mucous membrane. The bony arch or bridge is formed by the superior maxillary and nasal bones. The cartilaginous arch consists of upper and lower lateral cartilages, and the sesamoid cartilages, usually three on each side. The alæ or wings contain no cartilage, but are composed of cellular tissue and fat. The nasal cavities are the commencement of the upper respiratory tract. Upon the lateral walls of the nasal chambers are found the turbinate bodies, superior, middle and inferior, which frequently cause considerable trouble when hypertrophied. The mucous or Schneiderian membrane is a continuation of the external integument as also with that of the pharynx, the Eustachian tubes and the accessory sinuses. Sometimes the membrane is called pituitary (meaning phlegm-producing). In many portions of the nose it is very thin and cannot be separated from the periosteum or perichondrium, but over the inferior turbinate and adjacent portion vascular tissue intervenes. In this region we find the erectile tissue, which, when active, will easily cause a stenosis of the nasal chamber. Some of the commoner conditions we meet with in the pathology of mucous nasal surfaces are disturbances of circulation, those known as inflammations, progressive disturbances of nutrition, regressive disturbances of nutrition; and under the disturbances of circulation we find anemias and hyperemias.

The two preceding conditions do not require particular description. We have also to deal with those known as angioneuroses, represented by angioneurotic edema. There is also edema from cardiac or renal disease. This condition is to be sharply distinguished from acute inflammatory edema, and from the angioneurotic affections. If the stasis is of long duration the vessel walls of the parts become gradu-

*Read before the Jackson County Post-Graduate Society.

ally more penetrable, and a large number of white blood corpuscles find an entrance into the neighboring tissues, although in the beginning of the disease there was only a serous transudate without any mingling of the corpuscular elements.

Hemorrhages from the nose may be a symptom of hemophilia or scurvy.

Inflammations attacking the upper air passages may be divided into the following groups: 1. Neurotic inflammations; 2. infections or acute traumatic inflammations; 3. chronic inflammations with a tendency to hypertrophy, and 4. chronic inflammations with a tendency to atrophy.

Under neurotic inflammations, first, we have a condition known as herpes zoster, which has been found to unquestionably exist on the mucous surface of the nose and throat. It does not particularly involve the tonsils or the lower pharynx. While the histological appearances do not seem to have been described at any length, the condition undoubtedly is similar to those obtaining upon the skin, namely, in the first stage, an exudation of clear fluid between the epithelium and the rete mucosa, which in a few days becomes turbid from the exudation of leucocytes.

Vasomotor rhinitis: The histological information regarding this affection is extremely scanty, and much that we have has evidently been deduced from microscopic examination. Objectively, the tissue exhibits a pallor, swelling and a free watery discharge, which, under the microscope, shows a free desquamation of the epithelial cells, the cytoplasm of which was very considerably swollen. The nuclei show a diminished affinity for aniline stains.

This condition differs from that which we should expect to find in acute inflammation chiefly in what may be called a hydropic alteration of the epithelial cells, and relatively a slight increase in cellular infiltration is existant.

Infectious or traumatic inflammations: We have those which are directly dependent upon bacterial, chemical or physical irritants. From a histological standpoint the question of the bacterial or nonbacterial nature of the irritant is a secondary one. The effect produced by the bacterial toxins may be almost exactly duplicated by chemical, mechanical or physical agents. For example, we may have an acute inflammation of the mucous membrane due to an incision or to a chemical or thermic cauterization closely resembling that produced by the

toxins of the diphtheria bacillus or the streptococcus pyogenes. Another instance may be found in the histological lesions produced by the bacillus of tuberculosis and by an aseptic foreign body. While both a primary trauma, that is an agent which suspends the normal function, and secondary irritation from the introduced substance that is the toxin, or other foreign body, are essential to the production of the lesions, histologically, and yet great variation may exist in the two factors.

On the basis of the preceding considerations infectious inflammation is divided into: 1st. Inflammations of undetermined bacteriology; 2d. those due to specific germs.

The former class comprise a large number of affections of the nose, and are manifested by a degeneration and necrosis of cells, by exudation from the blood vessels, by proliferation of the cells, and by phagocytosis.

Acute inflammations of the mucosæ may be proliferative or exudative, according as the irritating agent is mild or severe. In the first case, the result is an acute catarrhal rhinitis, pharyngitis or laryngitis, and in the latter it is a fibrinous inflammation of these parts.

Infectious inflammations, due to a specific germ, such as diphtheria, manifests itself in the mucous membrane of the nose in the form of an inflammation which may be catarrhal, exudative or necrotic. There is no reason to suppose that the first condition differs histologically from that occurring in acute rhinitis. The formation of the pseudo membrane begins usually with the necrosis of the epithelium and with the deposition of an exudate in and upon the surface of the latter. This membrane may be deposited in one or in several layers, which may show certain differences of age among themselves. It consists of a delicate fibrous network, or of a closely woven network of thick glistening strands in the meshes of which there may be either many leucocytes or almost no cellular elements. The upper layers of the false membrane which as a rule contain the largest number of germs are frequently seen to have undergone *fragmentation* into a granular detritus. The mucous membrane itself experiences alterations in the form of hyperemia, round cell infiltration and frequently fibrinous exudate. If the necrosis is limited to the epithelium recovery occurs without scar formation. If the mucous membrane is necrosed a loss of substance occurs and heals by granulation and the formation of scar tissue. The germs of diphtheria are constantly found in the false

membrane, most frequently in the superficial layers and also in the superficial layers of membrane itself.

Influenza: Clinically, the nasal mucous membrane exhibits but slight alterations, these consisting chiefly in a dilatation of the blood vessels and increased migrations of the white cells through the epithelium. In cases of greater severity there appears an increased amount of infiltration in the adenoid layers, together with a heightened desquamation of the superficial epithelium and exudation of blood into the *tunica propria*. The edema has been observed to be rather irregularly distributed, being in some places entirely absent and in others concealed in the lymphoid layer.

Typhoid fever lesions on the nasal membrane and upper respiratory mucous surfaces may be divided into three groups: 1st. An active congestion; 2d. ulcerations occurring in the later stage of the preceding classification,—these may lead to a breaking down of the cartilaginous frame work, and 3d. ulceration which behaves in the same manner as the characteristic intestinal affection.

Syphilis: The unit of syphilis appears in the mucous membrane as a sharply circumscribed and compact infiltration in the papillæ and round cells of mucosæ, which do not pass into permanently organized connective tissue, but which always undergo a retrograde process either by absorption or suppuration. This infiltration has a characteristic direction and method of progress,—according to the infiltration one side constantly enlarges and the other side exhibits a retrograde metamorphosis,—the enlargement and retrogression takes place always in a centrifugal manner.

Leprosy of the upper air passages is of course a rare condition. Four stages may be distinguished, the prodromal, the infiltrative, the ulcerative and last the formation of scar tissue. The first stage may be extremely prolonged, after marked infection and swelling of the mucous membrane the disease attacks particularly the septal cartilage, being frequently superimposed upon a rhinitis anterior. For this reason nasal hemorrhage has been frequently given as a prodromal symptom of leprosy. We also meet conditions known as *mycosis fungoides*, *leptothrix mycosis*.

Rhinoscleroma is rather a rare condition in which we meet the tissue in a condition of swollen edematous disintegration, composed largely of plasma cells irregularly distributed in all layers of the mucous membrane and in the submucous tissue.

Under progressive disturbances of nutrition we find the malignant tumors, carcinoma and sarcoma, and the benign tumors, of which papilloma, adenoma, fibrous and lipoma are examples. A true myxoma has not been reported so far in statistics as occurring in the nose.

Under **retention tumors** we may mention cysts. In the nose cysts of various sizes occur most frequently in polypi and in the antrum resulting from the occlusion of an efferent glandular duct with a resulting dilatation of the gland. Such cysts are lined with epithelium and contain mucus.

Under neuroses we have anosmia or the loss of the sense of smell, frequently the result of stenosis from a mechanical blocking of the odoriferous particles from the olfactory portion—destruction of nerve terminals, empyemia of ethmoid cells,—inhalations of pungent gases,—the use of snuff or strong astringents. Bichloride of mercury should never be used in the local treatment of the nose under any conditions. Anosmia may be unilateral or bilateral.

Hyperosmia is oversensitiveness of olfaction and is met with in hysteria and neurasthenia and usually the result of lowered physical vitality. Odors are frequently perceived for hours after their removal, mental suggestion will bring them back.

Parosmia: Is a condition in which there is perversion of the sense of smell usually due to brain lesion or is met with frequently in epilepsy. It is found in insanity, lead poisoning and locomotor ataxia.

Anesthesia is a rare condition due to paralysis of the fifth nerve caused by tumors and syphilis involving brain mucosæ, also present in hysterical attacks.

Nasal neuralgia is frequently seen and usually due to turbinate hypertrophy or empyemia of maxillary sinus.

Nasal reflexes, like reflexes of other parts of the body, are frequently caused by distant disorders. However in the practice of medicine the term reflex is used to cover a multitude of affections. Nasal cough and ear cough are good examples of reflexes, and are usually the result of pressure. Redness at the end of the nose may be due to hypertrophic rhinitis, especially when the hypertrophy is anterior. This condition is also caused from other things not necessary to mention.

Tinnitis, pain in the ear and itching of the auditory canal may also be caused by a hypertrophy or a spur. Then using the aural speculum, cough is frequently referred to the larynx.

Periodic hyperesthetic rhinitis: Synonyms are hay fever, rose cold

pollen catarrh, peach cold and autumnal catarrh. I believe there is a reason why all are not susceptible.

First. There must be a predisposing constitutional condition.

Second. A pathological condition of the nasal membrane.

Third. The external irritant.

Usually the individual will anticipate the attack. A case has been reported which states that the affection was brought on by the patient looking upon a picture of a hay field. In more than one-fifth of all cases reported more than one member of the family was affected. There is usually present in individuals suffering from hay fever enlarged turbinates, spurs, polypi and enlarged tonsils. The external irritant is usually the pollen from grasses, weeds, flowers or fruit. The condition is one met with in country practice, as well as in the city. The early symptoms are those of acute rhinitis, itching of the nose, sneezing, lachrimation, swelling of the nasal membranes which causes a mechanical blocking of the air passages, and itching and burning of the eyes. There may be chilliness and fever, accompanied by severe frontal headache, pain in the eyes and loss of the sense of taste. Tinnitus and deafness may even occur. The condition seems worse in daytime and in the sunlight, often driving the patient to a dark room. These attacks are very debilitating and the affection may last for weeks.

Acute catarrhal rhinitis: **Acute nasal catarrh,** coryza, cold in the head and snuffles. By acute catarrhal rhinitis is meant the primary inflammatory stage of the mucous membrane lining the nose. The condition is of a catarrhal nature, which frequently implicates adjacent sinuses and often extends as far down as the larynx. It is oftentimes caused by very sudden changes in temperature and damp weather, such as we have in early spring and the late fall months. In summer the irritating cause is usually dust. Indigestion and frequently constipation are aggravating causes especially where the bowels are overloaded: daily wetting of the hair frequently predisposes to these attacks. Small-pox and the secondary stage of syphilis as well as measles are usually ushered in by catarrhal symptoms. There is usually a stuffiness in the nostrils, a watery discharge, chills and fever. The mouth and throat are liable to be dry. If the frontal sinuses are implicated there will frequently be frontal headache with the pain particularly immediately over the eyebrows. Frequently the eustachian tubes become infected and deafness may result. Usually during the first stage the nasal secretion is thin and watery, but in three or four days the secre-

tion becomes thicker and assumes a yellowish color and may be blood streaked. Ordinarily the attack can be relieved in a few days providing the patient has no organic turbinate growth. Of course, if the turbinates are considerably enlarged so that the nostril is obstructed removal of these bodies is indicated.

Simple chronic rhinitis, also known as chronic coryza and chronic nasal catarrh, is a nonspecific inflammation of the soft tissues of the nostrils without new organization, which is usually accompanied by similar conditions of the pharynx and larynx. This condition is ordinarily the result of repeated acute attacks, and usually there is a lack of general nutrition and a debilitated constitution. Certain occupations predispose to this disease, for example, working in shops where the air is dust laden. Sexual excitement is a predisposing factor in both sexes and in women the condition is aggravated during the menstrual flow, as well as during pregnancy. The patient will manifest many symptoms of the acute catarrh; during damp, cold and changeable weather the symptoms are greatly aggravated; there is difficulty in breathing through the nose because of the swelling, and excessive discharge is blown from the nostrils. This nasal discharge is usually watery in character however it may be thick and yellow in color. Frontal headache is common and deafness with tinnitus is frequent. This form of rhinitis is distinguished from the hypertrophic, in that the anterior lower turbinates can be compressed with a probe. There is a decided shrinkage of tissues for a short time after the application of *cocain*. In the hypertrophic form the pressure of the probe or the application of *cocain* does not cause a collapse of tissue. The disease is usually readily controlled by proper treatment administered in due time.

Hypertrophic rhinitis is a condition of chronic inflammation, characterized by organic changes which are usually the result of long continued chronic rhinitis, although all cases of chronic rhinitis do not terminate in the hypertrophic form. The use of mineral astringents must be noticed as causative factors; local lesions such as deflected septum, spurs, or ridges are likewise etiological factors. Organization takes place in the thickened tissue and new vessels are formed with great rapidity. The new growth is not uniform and is usually more pronounced on the free borders of the middle and lower turbinate. These changes do not occur at once but take years to develop. The patient complains of being unable to inhale or exhale, and this is

aggravated when lying down. The blocking of the air passage results in so-called "mouth breathers." Of course, this means a dry coated tongue, dry throat, and it not infrequently accompanied by a disagreeable cough, and there may be periodic frontal headaches. The posterior nares is usually involved, and a dropping of mucus into the throat is noticeable particularly in the morning on rising. Frequently seen ocular neuralgia occurs, also inflammation of the lids, and even painful vision, especially in direct light. These conditions all may be accompanied by asthma: usually surgical treatment is the only radical relief.

Atrophic rhinitis is also known as atrophic catarrh, dry catarrh and fetid catarrh. Quite the reverse of the last condition mentioned, this condition is one of a wasting away of the mucous tissue and adjacent elements. Very frequently accompanying this we meet infection of the accessory sinuses. It may be the result of the hypertrophic form, and is usually the result of working in ill ventilated rooms,—alcoholism and syphilis may be the direct cause. When the latter is present ozena ordinarily supervenes. The characteristic feature is a dryness of the mucous membrane, which is due to the destruction of the glands normally present. It may also be due to nondevelopment, or a surgical destruction of the turbinal tissue. There will be a shrivelled condition of the membrane, frequently the cavity is so enlarged that the posterior pharyngeal wall may be seen. Usually the anterior ends of the turbinates are absorbed. Ordinarily a little congestion or swelling is found as in the other forms of rhinitis. We have present dry crusts and scales adhering to the walls which are difficult to remove without causing bleeding. There is commonly a total loss of the sense of smell, much depending on the age of the patient. Of course, where the vitality is destroyed it is hard to obtain results, but with a good constitution much can be done to relieve the dryness and the formation of the scabs and to prevent the offensive odor present. The treatment must be both local and constitutional.

Strumous rhinitis of children is a subacute and chronic purulent rhinitis, characterized by a thick yellowish or greenish discharge. For a great part some authorities maintain that the disease more frequently manifests itself in syphilitic and tuberculous individuals. During the early stage there are many symptoms like those of acute rhinitis,—later, a heavy yellowish, purulent discharge from the nostrils, which excoriates the edges of the nostril and the upper lip,—during sleep the

nose becomes blocked on account of the secretions drying,—there may be large faucial and pharyngeal glands and frequently the glands of the neck become enlarged also, and the great absorption and swallowing of the mucus causes the child to have a sick and pale appearance. Usually the outcome is favorable if the disease is looked after during the early years, but if allowed to go too long an atrophic rhinitis supervenes and a cure is less probable. The treatment is usually entirely local, although general health and hygiene must not be overlooked.

Syphilitic rhinitis is due to the specific infection. Primary syphilis is rarely seen in the nose, and when found is the result of the contagion being carried by the fingers or instruments. The secondary and tertiary stages on the other hand frequently implicate the mucous membrane of the upper respiratory tract. The primary lesion occurs usually from one to five weeks after infection, generally circular, the edges being well defined and accompanied by a mucopurulent discharge. There may be swelling within the nostrils and the submaxillary and the cervical glands are usually enlarged. The secondary stage generally develops within six months, however this may be postponed for a much longer period. This stage usually merges into the third stage and there may be no distinct line between the two. The virus may spend itself during the secondary stage or it may remain dormant for forty years. The third stage is characterized by a blocking of the nostrils due to infiltration of the mucous tissue. There is ulceration, with offensive discharge, when the secretion dries it forms in the nostril a yellowish green scab. If the ulceration is not checked it will destroy the cartilage and the bony septum, and may extend to other bones of the face and skull; with this necrosis of the septum we have a condition known as saddle nose. Small red nodules on the wings of the nose precede the destructive process, this usually causes frightful deformity. With the dead bone and discharge accompanying it, there is an offensive odor almost unbearable; the patient's sense of smell being usually destroyed, he is not conscious of the offensiveness. The ulceration may extend to the hard palate causing perforation and the destruction may involve the entire roof of the mouth. During the early part of this stage gummata appear on the septum and the turbinals. Specific rhinitis cannot always be distinguished from the nonspecific variety unless we have the skin eruption and the mucous patches and history of infection. Tenderness of the nasal bones is a suspicious symptom in diagnosing syphilitic rhinitis. The treatment is, of course,

constitutional but much depends upon local conditions, and the amount of tissue already destroyed. If there is dead bone it must be removed, and all purulent foci must be eradicated.

Under tumors of the nose we have the mucous polyp which will be the only one that I will consider. These are also known as gelatinous polypæ. Usually there is some impairment of circulation and I believe, in every instance where polyps are present in the nose or ear, this is a direct evidence of the presence of dead bone. These growths are ordinarily attached to the middle turbinal and are invariably multiple. However, one side of the nose usually contains more than the other. The male sex is predisposed to this condition. Their color is usually grayish white, resembling the pulp of a grape or an oyster, occasionally they are a pale pink in color. The symptoms observed by the patient is that of a sense of obstruction and stuffiness which is aggravated by damp weather,—there may be a discharge of semi-transparent grayish mucus. If there is disease of the accessory sinuses the secretion may be yellowish, or even contain pus. If the polyp is attached by a long pedicle, during forced nasal breathing there will be a sensation of a valve-like obstruction. Usually the sense of smell and taste is impaired. There is frontal headache and usually a dead voice with a faint nasal twang pertains. Seldom external deformity occurs. The proper treatment consists in removing by means of the cold wire snare when practical;—the free use of the cautery either actual or chemical is to be tabooed. After their removal it is essential to search for any dead bone which may be the cause of their presence.

Union Bank Building.

COMMON MISTAKES IN THE DIAGNOSIS OF EYE DISEASES.*

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ACCURACY in diagnosis has long been a proud boast of Ophthalmology. In this respect it has led other branches of medicine up to the present time. Latter-day discoveries have likewise augmented and fortified this accuracy. The progressive literary requirements for admittance into our medical colleges, and their more thorough didactic and clinical instruction, make for the same result. Even the prevalent dissemination of medical knowledge among laymen will help. Yet as long as "'tis human to err" mistakes will be made.

"Granulated lids" still seems to be the scapegoat of Ophthalmology. I believe it will not be many decades before the entire medical body will label this disease correctly. Every physician knows, or should know, that granular lids (trachoma) is an eye disease worthy of serious consideration. The fact that no immigrant afflicted with it is allowed to enter this country is testimony of its significance. In a disease in which the symptoms are so plainly manifest, so easy of demonstration, one can hardly conceive how a mistake in diagnosis can be made. The careful observation of a few cases will impress the clinical picture indelibly upon the mind; it should do so, just as it does with reference to the differential diagnosis of measles. I know of but one disease likely to be confounded with it, viz., follicular conjunctivitis; there are some who contend that there is but little pathological difference between these two diseases. We may well suspect that "granulated lids" is often diagnostic sop. Perhaps in the majority of such cases the disease is a simple conjunctivitis. Therefore the false diagnosis works no harm other than to alarm the patient or his parents; the therapeutics adopted are usually mild or indifferent in character.

Perhaps we shall never cease to occasionally mistake iritis for other diseases. Its presence is sometimes overlooked altogether. I know

*Read before the Missouri Inst. of Hom., Kansas City, Mo., April, 1912.

of a reputable oculist who failed to discover an iritis, in a patient whom he was treating, in the secondary stage of syphilis. He suffered the chagrin of having the patient's family physician point it to him. The oculist had simply neglected to use a mydriatic. It is therefore pardonable for the inexperienced or non-expert to fail in making a correct diagnosis.

Four eye diseases are frequently confounded, one with the other, viz., iritis, conjunctivitis, keratitis and glaucoma. A typical case of any of these should not mislead even the beginner if he but be on the watch for their most pathognomonic symptoms; iritis has a contracted, sluggish pupil and the exhibition of a mydriatic may reveal posterior synechiae, causing it to present an irregular outline; conjunctivitis has a mucous, muco-purulent or purulent secretion; keratitis always presents cloudiness or some interference with the transparency of cornea; glaucoma is distinguished by a dilated, almost immobile pupil and increased tension of the eyeball. A combination of two of these diseases in the same eye, as sometimes happens, complicates the diagnosis; such a condition is calculated to deceive the most expert, more especially if, for any reason, he may be taken off his guard.

Every ophthalmologist observes in the eyes of patients, who come to him for the examination of their refraction, the remains of an old iritis—iriditic adhesions to the posterior capsule of the lens. Some of these patients will disclaim ever having been afflicted with an eye disease. Cross-questioning will reveal the fact that the onset of their visual symptoms followed close upon the heels a so-called attack of tri-facial neuralgia. This mistake in diagnosis has left in ruins many an eye that might have been preserved intact.

It is almost universally known that the presence of an eye blind from an infected wound is a constant menace to the sound eye. The ophthalmologist will warn the patient, his physician, or his friends, to be prepared to meet any suspicious symptoms that may arise at any future time. In spite of all this many cases have been overlooked. I have one on record that was treated for a "bilious attack." Being forearmed, as well as forewarned, blindness may be prevented; prompt treatment in such cases will often conserve useful vision.

There does not seem to be any excuse, even for a senior medical student, in labeling cataract a plain, self-evident opacity of the cornea. This mistake is still too frequently made by the doctor. It has the saving grace of being harmless. He may be misled by the common conception of the laity that a cataract is "on" the eye.

What have we to say, in this connection, of conjunctivitis neonatorum? Literally the term means conjunctivitis of the new-born. It was at one time the common belief that this disease was invariably specific in origin. Every modern doctor has frequently observed in these patients conjunctivitis of a mild, non-specific character. It is perhaps unfortunate that this inaccurate term still clings to the nomenclature of Ophthalmology. The diagnostic difference between these two forms of conjunctivitis neonatorum is clinically manifested by their degrees of virulence respectively. Of course the microscope will decide the matter definitely. Faithful application of approved prophylaxis in obstetrical practice will almost always abolish the opportunity of making a mistake in diagnosis.

Olivia Bldg.

Mediastinal Causes of Chronic Cough in Children.—French (*Brit. Med. Jour.*) believes that chronic enlargement, sometimes associated with tuberculous caseation, of the lymph nodes at the bifurcation of the trachea is a cause in these cases of chronic cough. The bronchial node immediately below the right bronchus is affected far more frequently than is the node on the left side, and the right phrenic nerve is frequently seen to be displaced by the enlarged lymph node in such a way as probably to be much irritated by it and thus lead to attacks of purposeless coughing—that is to say, coughing which does not succeed in bringing up any sputum. In a certain number of cases it is possible to demonstrate the enlargement of this right bronchial node by means of the Roentgen rays. The author suggests that the attacks of coughing which are so troublesome in some heart cases are to be explained by irritation of the phrenic nerves in a similar way, by their being displaced and stretched by the dilated and hypertrophied heart. The importance of realizing that enlarged bronchial lymph nodes may be the cause of persistent coughing in children is that the enlargement is generally tuberculous, and therefore the correct treatment is to adopt the general hygiene best adapted to the relief of a tuberculous infection together with measures calculated to prevent the swallowing of more living tubercle bacilli, an end to be accomplished either by obtaining milk from cows that have been tested satisfactorily with tuberculin, or else by making sure that any tubercle bacilli in the milk have been killed by efficient sterilization, preferably by thorough boiling.

SOCIETIES.

AMERICAN INSTITUTE OF HOMOEOPATHY.

COMMITTEE ON TRANSPORTATION—IMPORTANT NOTICE.

Chicago, March 26, 1912.

The Transportation Committee has decided to utilize the Pennsylvania lines, both from New York and Chicago. We have obtained a rate of one fare and three-fifths on the Trunk Lines Association, which means the territory east of Buffalo and Pittsburgh, west of the Hudson river, north of the Potomac river and south of the Canadian line, also New England Passenger Association, which includes all of New England.

This is on the certificate plan, and all members asking for a certificate as they buy their ticket can avail themselves of this rate. Remember, that a receipt is not a certificate. On previous occasions people who have gotten a receipt for their ticket have not been able to take advantage of the rate, due to the fact that a receipt is not recognized by a railroad.

Dr. J. B. Garrison, Suite 26, 618 Madison Ave., New York, will take charge of the eastern end and make the arrangements for the New York and eastern route. From Chicago we propose to leave Saturday, July 15th, at 8 P. M. Special cars will be placed on that train to take care of the people going from Chicago to Pittsburgh. I hope all who go through Chicago to Pittsburgh will take advantage of this so that we can all go together. The train reaches Pittsburgh at 9:25 Sunday morning, which is a nice hour with a minimum loss of time from office hours and other things, giving us plenty of time in Pittsburgh to arrange ourselves so we can attend the evening meeting. Those who have summer tourist rates reading beyond Pittsburgh, will be obliged to take the train at 5:30 or on the earlier in the day, as the eight o'clock train will not honor tickets beyond Pittsburgh, but all other tickets from whatever point going as far as Pittsburgh only will be honored on that train.

The fare from Chicago will be \$10.50 one way, or \$20.00 a round trip. This is practically on a two cent basis. The Central Passenger Association have refused any special convention rates this year due to the fact that the Interstate Commerce Committee is, at present, considering the question of further reductions on their lines.

We have had no communication or report from the Trans-Continental Association, but we hope that we may be included in whatever rates are made.

First class up-to-date sleepers will be provided, and if a sufficient number go through from Chicago, a special train will be provided to follow the eight o'clock train immediately after it leaves. We feel that there is an advantage in going on our own cars, as it gives the new members an opportunity of becoming acquainted with the older ones, at the same time assuring us the best equipment and the newest up-to-date cars. Those beyond Chicago from the south or west who are to take advantage of the train going with the crowd can have accommodations reserved for them by addressing the Chairman of the Committee.

With kind regards, I am,

Fraternally yours,

T. E. COSTAIN.

THE AMERICAN LARYNGOLOGICAL, RHINOLOGICAL AND OTOLOGICAL SOCIETY

will hold its 18th annual meeting in Philadelphia on May 13th, 14th and 15th. Among the abstracts of papers to be presented we note the following:

Sphenoidal Sinusitis in Relation to Optic Neuritis.

Illustrated by lantern slides.

JOSEPH P. TUNIS, M. D., Philadelphia, Pa.
(Candidate's Thesis.)

Abstract:

After calling attention to some anatomical variations of the parts involved, from a study of over five hundred wet preparations, the author gives the histories and autopsy records of nine cases. In case No. 9, sections of the optic nerve on the affected side showed decided evidence of superficial neuritis. His conclusions are as follows:

1. Anatomically the posterior ethmoid and the sphenoidal sinus must be regarded as having practically the same intimate relations with the optic nerve.
2. The larger the sinuses, the less the danger of infection from near-by inflammations.
3. Infection of the optic tract by a spreading of sphenoidal or posterior ethmoidal sinusitis is due more to continuity and proximity than to any peculiar arrangement of the lymphatic system in this region.
4. Sphenoidal sinusitis may occur independently and unassociated with ethmoiditis, or frontal sinusitis.
5. In a series of examinations of the accessory sinuses of one hun-

dred heads after death, tuberculosis was noted in the mucous membrane of only one case. This was of a diffuse and not very definite variety.

6. When the sphenoidal sinus is the seat of chronic inflammation the importance of a prompt diagnosis and the institution of equally prompt remedial measures cannot be too much emphasized.

The Need of a Standard in Voice Production.

WILLIAM J. HENDERSON, ESQ., New York, N. Y.
Musical Critic, *New York Sun*.

(By invitation.)

Abstract:

The psychological basis of vocal teaching, the exclusive basis of teaching methods in the "Golden Age of Song." The physiological basis never an exclusive basis at all, because never completely understood by teachers. Failures in modern teaching and confusion in vocal terminology largely due to want of organic union between the psychology and physiology of voice teaching. Desired result to be attained is by closer community of knowledge between teachers and throat specialists. The new pedagogy of the vocal art would thus be founded on sound psychological and physiological principles. A general and authoritative science would be built up. Critics also would have to learn it in order that the public attention might be rightly directed.

The Result of Eighteen Years of Research Work in Voice Production and Voice Analysis.

WILLIAM HALLOCK, Prof. Physics,
Columbia University, New York, N. Y.
(By invitation.)

FLOYD MUCKEY, M. D., New York, N. Y.
(By invitation.)

Vocal Art Science From the Standpoint of the Teacher—A Contribution to the Subject of Tone Production.

MR. and MRS. HENRY HOWARD BROWN, Colo. Springs, Colo.
(By invitation.)

Basis for discussion:

The correct or standard tone vs. deviations caused by faulty methods of tone emission.

Abstract:

1. A designation of the standard tone, and description of the action producing it.
2. Relation of bad production to pathological conditions.
3. Interferences arising from wrong production causing deviations from the standard.
4. Cause and effect in singing.
5. Correct relation of the physical and psychological in singing.
6. Registers, *mezza di voce*, falsetto, open and covered tones, tremolo.

7. The female voice, the speaking voice.
8. Possibilities of a correct method of tone production applied to school children.
9. Suggestion for closer co-operation of laryngologists and singing teachers.
10. Suggestions for collaboration of laryngologists, critics and teachers which will lead to a standard method, elevation of vocal art and recognition of vocal teachers as a class.

Mastoid Sequestra Containing All Three Semicircular Canals, With a Report of the Subsequent Labyrinthine Reaction.

J. M. INGERSOLL, M. D., Cleveland, O.

Abstract:

Girl, age 6. Evident mastoid infection on right side.

History. Scarlet fever two months ago, followed by suppurative otitis media dextra. Severe headaches, nausea and dizziness which gradually disappeared.

Examination. Profuse, foul, purulent discharge in right ear. Middle ear filled with granulation tissue. Swelling and tenderness over mastoid. No caloric reaction in right ear. No spontaneous nystagmus. No facial paralysis.

Operation. Two sequestra, one composed of most of the mastoid cells, the other, the major part of the petrous portion of the temporal bone including all three semicircular canals. Recovery uneventful. Gradual compensation of the loss of the right labyrinth.

The Eustachian Tube in Chronic Otitis Media.

EDGAR M. HOLMES M. D., Boston, Mass.

Abstract:

1. General pathology. The associated inflammation in ear and tube may vary in degree, a severe inflammation of tube may exist without showing aural signs. Very slight changes in the tube may cause severe aural complications.

Etiology: Nasal pathology. Marked deformities may exist without apparent trouble in the Eustachian tube or ear, and again the relief from slight nasal disease sometimes results in a cure of severe salpingitis and the resulting middle ear conditions; systemic disease; circulatory; digestive disturbances.

Prognosis. As yet our knowledge is not sufficient to give a positive prognosis; many severe middle ear inflammations of long standing, with marked loss of function, after having failed to respond to long courses of treatment by other methods, may be received by restoring the Eustachian tube to its normal function.

Treatment: General epipharyngeal applications; surgical treatment of hypertrophies and growths; dilation with bougies; application within the tube, and general hygienic and systemic treatment.

Treatment by the Orthodontist Supplementing that by the Rhinologist.

A. H. KETCHAM, D. D. S., Denver, Colo.

(By invitation.)

Illustrated with lantern slides.

Abstract:

To do their full duty by their little patients the rhinologist and the orthodontist must work together, for the work of one supplements that of the other. In many cases the efforts of one are practically useless without the aid of the other.

Failures in establishing normal breathing through adenoid operations may be made successes, in the great majority of cases, by the intervention of the orthodontist.

The orthodontist, by gentle pressure, moves the maloccluded teeth into normal positions and relations; stimulates bone development, increasing the size of the maxillary bones and the nose cavity.

By causing normal development of the maxillary arch, the roof or vault of the mouth, and floor of the nose, a deflected or "S" shaped septum—when hypertrophy, ledges and spurs are not present—is often corrected, in our younger patients, and benefited in the older.

In order to receive full benefit from orthodontic treatment about 50 per cent. of the orthodontist's patients require the services of the rhinologist.

In order to receive full benefit from rhinological treatment many of the rhinologist's patients must also be treated by the orthodontist.

Case of Bilateral Inflammation of the External Auditory Canal.

DUNBAR ROY, M. D., Atlanta, Ga.

Abstract:

The case, as far as the author can learn, is unique. The patient was a woman of 50, who, when first seen, showed characteristic swelling of the right external canal. Prompt recovery under deep incision. Shortly after, the left canal became involved. Improvement, but not recovery under treatment. Headaches, persisting for three weeks. Temperature and blood condition showed sepsis. Middle ear never involved. One chill. Death. Autopsy showed septic thrombosis of right lateral sinus. Organized clot in left lateral sinus. Middle and internal ears macroscopically normal. Question of sepsis in this case depended upon its origin from the auditory canal. The importance of considering in the future the possible gravity of fununculosis of the external auditory canals.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION

will hold its thirty-fourth annual congress on May 9, 10 and 11, 1912, in the Hotel Chelsea, Atlantic City, N. J. From the program of thirty

instructive papers the following subjects are particularly interesting: "Report of a Case of Primary Carcinoma of Cushion of Eustachian Tube," "The Upright Position in Either Operations Upon the Nose, Throat and Other Portions of the Head, With Demonstration of a New Method for Attaining the Position With Expedition, Ease and Safety," "Some Anatomical and Clinical Relations of the Cavernous Sinus and the Third, Fourth, Fifth, Sixth and Vidian Nerves."

Ocular and Auditory Troubles From Hectine. Valude (*Annales d'Oculistique*, October, 1911) analyses chronic syphilitic case treated with injections of twenty centigrammes of hectine every other day. These promptly weakened the patient and after the fifth injection he complained that he could neither see nor hear. He had long been hard of hearing from sclerotic otitis, but four months before this course of treatment his vision was pronounced "normal" (V. = $\frac{2}{3}$, age 72). June 12th the field in both eyes was reduced to central vision where its acuity was about $\frac{1}{3}$. The ophthalmoscope revealed no lesion at the fundus nor of the media. The deafness was nearly complete but under strychnine and galvanism hearing was restored a week later to its condition before the treatment; the vision however was worse and a few weeks later was 0. In August ophthalmoscopic examination was absolutely negative; light reflexes had disappeared. By the 5th of October the first objective sign (blanched disks) of simple optic nerve atrophy could be perceived.

Recognizing the possibility of spontaneous alteration of the medicine, the conclusion is reached that the dose had better be limited to ten centigrammes and that hectine should be avoided in patients unless the optic and auditory nerves are absolutely healthy.

Hectine (Benzo-sulphone-, para-amino-, phenyl-arsenate of soda) contains 19.78 per cent. of arsenic; that is the patient receives 19.78 milligrammes of arsenic in each 10 centigramme dose of hectine.

The blindness and temporary deafness in the above old man were caused by five doses of 39.56 milligrammes of arsenic injected at intervals of two days.

HOMŒOPATHIC MATERIA MEDICA AND THERAPEUTICS.

DEPARTMENT EDITOR, PHILIP RICE, M. D.,

San Francisco, Cal.

BADIAGO.

PHILIP RICE, M. D., SAN FRANCISCO.

THIS is an important remedy, and particularly valuable to the nose and throat specialist. Yet it is a remedy frequently overlooked; probably because of the absence of striking symptoms such as we find, for example, under belladonna, arsenic, nux, pulsatilla and many others. The constitutional or temperamental condition however is sufficiently characteristic to attract our attention and to make retention of its image in mind a thing quite as easy as that of almost any other remedy.

For a number of years the study of types and temperaments has had a special attraction for me; and experience in the application of the theory of temperaments in practice has convinced me of its great utility in some of our most trying cases; for example, those cases where the absence of symptoms makes the selection of the appropriate remedy quite impossible. In these cases an understanding of the individual morphological condition is of decided advantage. This enables one not only to more fully understand such symptoms as there are, but more clearly to estimate the general predisposition and the degree of susceptibility in the cases. And furthermore it has great value in the study of symptomatology in that a rational explanation of the course of development of symptoms can be had; there is less apparent hit and miss about their course, and more visible connection thru this understanding of organic growth and function, and the relation between parts and organs.

Technically speaking the temperament of badiaga is sanguine-vital. This is a temperament similar to that of calcarea carbonica, baryta carbonica, mercurius and several others. It is of course in a degenerate state; and the basis of this process of degeneration is syphilis chiefly.

It has many symptoms in both acute and chronic conditions similar to mercurius. There is however one striking difference between the

two remedies which will make differentiation always easy, namely, all conditions and symptoms of *badiaga* are < by cold and > by heat, whereas under *mercurius* they are > by cold and < by heat. Again under *badiaga* all are < in the day time and > at night, whereas under *mercurius* they are > in the day time and < at night. These are characteristic modalities of both remedies, and as they are directly opposite to each other there is little excuse for confusing them. It has a marked action upon the lymphatic system. In both acute and chronic lymphangitis, local and general, marked by severe induration it is a prime remedy. In children of the *calcareo carbonica* type with chronic or recurring induration of the cervical glands, hyperplasia of the lymphoid ring accompanied by the usual symptoms of obstruction to breathing, occlusion of the Eustachian tubes with deafness, quite profuse gluey mucus discharge from the throat in the morning, great sensitiveness to cold, a syphilitic base, *badiaga* will accomplish really marvelous results.

This is certainly not an unfamiliar picture. Very frequently are we called upon to operate on children of this type for the removal of adenoids and enlarged tonsils; and not infrequently, tho the operation be very well done, do these patients return to us with symptoms of obstruction again present. In these cases this remedy will invariably be one of the few needed to effect a perfect cure. It should in all probability have been given a few weeks' trial before the operation was done. It has been my practice for a number of years to administer the appropriate remedy to these cases for several weeks, and in a great many instances the operation was never performed. Where the enlargement is due to engorgement and not to hyperplasia the appropriate internal remedy is all that will be needed to accomplish the desired result. In children under five years of age, I think, this is almost the constant condition. *Badi.*, *Bar. carb.* and *mur.*, *Cal. carb.*, *Hydr.*, *Kali bi.* and *sul.*, are a few of the remedies that are appropriate to these states.

NATRUM MURIATICUM FOR FRONTAL SINUS INFLAMMATION.

PHILIP RICE, M. D.,

San Francisco, Cal.

ONE afternoon, some eight years ago, a lady called with her husband to see how urgent was the necessity of having her left frontal sinus operated. She had been told by another specialist that a delay of even twenty-four hours was dangerous. The history she gave of the trouble was in substance as follows:

Five years before she had an acute suppurative inflammation, which, after some weeks of careful treatment, subsided leaving only a slight tenderness. There were occasional exacerbations of the pain, but no evidence of suppuration. The attack of pain she had when she called had lasted for a week or ten days and showed no signs of abating. There was no redness nor swelling, but the entire area was very tender to the touch. Transillumination was uncertain. There was no discharge, but the nasal membranes were intumescent. I could see no immediate necessity for an operation; in fact, I saw no special indication for an operation at all, and so informed them. Medical treatment was recommended, and the advice was accepted.

Natrum muriaticum was prescribed in the 30th potency, with the result that in one week not a trace of the trouble remained, and in the eight years that have elapsed there has been no recurrence.

CASE II.

Several months ago a young lady called giving a history of incessant pain, quite severe in character, over the left frontal sinus; there had not been a moment's relief in six years. There was at times redness, and occasionally swelling of the eyelid in the morning. Transillumination showed dulness, the argyrol tampon bleached out completely in a few minutes; the region was exquisitely sensitive to pressure; a thick mucopurulent discharge filled the nasal cavity.

Natrum muriaticum 12x gave entire relief of the pain in twenty-four hours. Argyrol tampons were applied three times a week for several weeks with distinct benefit. Following natrum muriaticum,

kali sulphuricum 12x was given. At the last visit she reported having discharge only in the morning and that as bland in character.

A number of other experiences of a similar kind have led me to rely on this remedy more than on any other in this condition, but unfortunately I am not able to give any special indications for its selection, nor even to say where they may be found. In the first case I was led to give it—well, I suppose by inspiration. I can give no good reason for it, and in the subsequent cases I prescribed altogether upon my previous experiences. This, of course, is not a rational method and by no means to be recommended; my object in reporting these two cases is to stimulate others who are more able and better situated as to clinical advantages to work out clear cut and reliable indications for its selection.

My experiences lead me to look upon natrum muriaticum as a remedy of the first rank, and therefore I feel that it should be better known.

Head Building.

ABSTRACTS.

DEPARTMENT EDITORS.

WILLIAM O. MCLEAN, M. D.,

New York City.

FRANK O. NAGLE, M. D.,

Philadelphia.

Small Round Cell Myosarcoma of the Orbit With Extension Into Eyeball. Dr. Wm. Campbell Posey, of Philadelphia, reports a case of a female, age 15, brought to Wills Eye Hospital, January, 1910, on account of unusual prominence of right eye. Proptosis first noticed when the child was less than one year of age, and appeared without apparent cause. There were symptoms of an acute inflammatory condition involving the right orbit, *i. e.*, high temperature, general disturbance with forward, downward and inward proptosis. The exophthalmus disappeared in a few weeks with only a slight staring expression of that eye remaining. Two months previous to January, 1910, proptosis reappeared and continued to increase, also feeling of fulness and distension in the orbit. All movements of globe were restricted and vision getting hazy. On palpation orbital rim appeared unaffected. Ophthalmoscopic examination showed clear media and signs of stasis in papillomacular region. Marked haze and swelling of retina in macula, tortuosity of retinal vessels and dilation of the veins. No hemorrhages. Left eye unaffected. An operation of the Krönlen method was done. After careful dissection of the tissues about the nerve an irregular mass was felt below this structure seeming to consist of a number of small nodular swellings each the size of an almond extending from the apex of the orbit along its floor to a point corresponding to the equator of the eyeball. These nodular masses seemed to have no connection with the eyeball or the nerve but were imbedded in the tissues of the inferior portion of the orbit.

Judging the mass to be sarcomatous and fearing that the eyeball might also be involved in the malignant process, the globe was enucleated and the greater part of the contents of the orbit eviscerated. Healing was uneventful and after a few months the orbit was partially filled with apparently healthy tissue. Twenty-one months have now elapsed since the operation and there has been no evidence of recurrence. An artificial eye can be worn, though the implantation of two gold balls, one upon the floor, the other in the roof of the orbit, was necessitated before the shell could be held in proper position.

Under the microscope the masses were found to be composed of striated muscle fibers enclosed within a sarcolemma. They appeared to be more or less inflammatory in character, the cells showing proliferative changes, while the vessels gave evidence of a perivascularitis. The capsules were composed of fibrous connective tissue. Thus, together with a polymorphonuclear infiltration elsewhere into the orbit, first suggested an inflammatory tumor of the mixed type, and a tentative diagnosis was made of fibromyoma. Further examination of the orbital contents revealed large masses of granulation tissue with small round cell infiltrates and large mononuclear leucocytes and fibrous hyperplasia. One small area contained what are in all probability small round sarcoma cells.

Macroscopically the eyeball is normal in appearance, and a horizontal meridional section reveals nothing but a slight swelling of the nerve head. Microscopically the changes are striking and unusual, chief interest centered in a dense mass of nonpregmented spindle cells, which followed the course of a vortex vein, completely filling its lumen.

While the vessels of the ciliary body are structurally perfect, and their lymph sheaths uninvolved, all—both anteriorly and posteriorly—are filled with sarcomatous cells, the pathological process evolving these being evidently of an intraendothelial nature.

All other parts of the eye, with the exception of an edema into the nerve fiber layers of the retina in the region of the macula, appeared to be unaffected.

The growth was classified among the myosarcoma, the tumor originating as an endothelial sarcoma in the blood vessels of the orbit, the cells slowly following their course and showing a special selection for muscle tissue.—*Ophthalmic Record*, W. O. McL.

An Unusual Case of Steel Injury, by Frank Allport, M. D.. Two years ago A. B., aged 17, was hit in the right eye by a piece of steel which perforated the cornea and lens, but did not remain in the eye. A cataract was produced which gradually absorbed, leaving him with vision of 20/20 with correction.

November 27, 1911, while striking two hammers together he was again struck, this time in the *left* eye, by a piece of flying steel, which perforated the upper eyelid, cornea, iris and lens. X-ray could not then be taken. Giant magnet was used but with no response. Sclera then opened between external and inferior recti muscles and magnet used

freely. No result and no reaction from the operation. Five days later radiograph taken which showed the steel centrally located either in sclera or back of it.

A radiograph was taken, part of the exposure being with the eye directed forward, finishing the exposure with the eye turned to one side. In this radiograph two pictures of the foreign body were visible, showing that the steel moved with the eye.

Evidences of trouble appeared and a search for the foreign body was made by first opening behind eyeball. Meeting with no success eyeball was opened at posterior portion and this proved a failure to locate the steel.

The globe was enucleated and the steel was found in a mass of exudate which was attached to the eyeball.—*Ophthalmic Record*, W. O. McL.

The Visual Fields in Sphenoid and Ethmoid Sinusitis. The author gives very full clinical histories of ten cases examined by him in the clinics of Mr. F. R. Cross, Dr. P. Watson Williams, and Mr. Russ Wood in the Bristol Royal Infirmary and Shrewsbury Eye, Ear and Throat Hospital, followed by a short consideration of the etiology of field affections, ring scotoma and island field vision, and effect of treatment and prognosis, and deduces the subjoined conclusions:

Peripheral field contraction was present in every case, and marked temporal and particularly bitemporal contraction and bitemporal hemianopsia is characteristic of chronic sinusitis of the posterior group. This is due, in the absence of ophthalmoscopic changes, to the direct action of toxins upon the nerve by contact, and is not of reflex origin.

Peripheral contraction in the presence of gross neuritis is due to pressure from inflammatory edema within the optic canal, and in "fine" neuritis to pressure from hydrops vagina nervi optici, both resulting from the action of toxins.

Peripheral field contractions without fundal changes with fine neuritis and with gross neuritis in sinus affections are but degrees of the same pathological process, and indicate the amount of poison which has reached the nerve.

Central scotoma probably only occurs in acute sinusitis, and results from pressure, and possibly partly from the local action of toxins.

The differences in the ocular symptoms of acute and chronic sinusitis depend upon the amounts of toxin reaching the nerve; in the latter it soaks through the sinus walls slowly in small quantities; in the former carried more rapidly, and in larger measure by the vessels.

The result of treatment of the diseased sinuses on the contracted fields is most beneficial when the suppurations are acute, and when optic neuritis is present.

Operative treatment of the sinuses may cause temporary diminution of the visual fields.

Ring scotoma may result from sphenoidal sinusitis.

The perimeter should always be used in suspected sinusitis. Field changes help to confirm, and their absence to negative, the diagnosis, the presence of central scotoma calls for more active treatment.

White and green are the best test objects, the field for green being generally much more contracted than the fields for white.—*G. F. C. Wallis, M. D., Edin.;—J. Lar., Rhin. et Ol.* A. W. P.

BOOK REVIEWS.

THE OCULAR MUSCLES. *Second Edition.* By HOWARD F. HANSELL, A. M., M. D., Professor of Ophthalmology, Jefferson Medical College; Emeritus Professor Diseases of the Eye, Philadelphia Polyclinic; Ophthalmologist, Philadelphia General Hospital, etc., and WENDELL REBER, M. D., Professor of Ophthalmology, Temple University; Professor Diseases of the Eye, Philadelphia Polyclinic; Ophthalmologist, Philadelphia General Hospital; Past President American Academy of Ophthalmology and Otolaryngology, etc. 233 pages, 3 plates and 82 other illustrations. Price, \$2.50, net. Philadelphia: P. Blakiston's Son & Co. 1912.

This enlarged handbook on the muscular anomalies of the eye has been "rewritten." To those not familiar with the first edition attention is called to the clear exposition of the oculomotor nuclei, evolution of binocular vision and (Jackson's) table of prismatic effects of decentering lenses.

While in general it is a clear rendition of the subject still we regret that we can not commend the book as being absolutely up-to-date; *e. g.*, no description of, or even a reference to, Suffa's advancement operation, which was published in this JOURNAL in August, 1911, page 284 of volume xvii.

MODERN URINOLOGY. A System of Urine Analysis and Diagnosis. Illustrated. By CLIFFORD MITCHELL, A. B., M. D., Professor of Chemistry, Clinical Urinology and Renal Diseases, Hahnemann Medical College, Chicago, Ill. 636 pages. Cloth, \$3.00, net. Postage, 27 cents. Philadelphia: Boericke & Tafel. 1912.

Perusal of this book impresses one that the author has well accomplished the aim which he had in view in writing it—*i. e.*, "to show in plain language how to overcome the various difficulties" which the general practitioner meets in analyzing the urine, "as well as to give the usual information afforded by the numerous authorities." A peculiar and especially practical portion is the series of "Laboratory Notes" throughout the text, by means of which the practitioner "is informed of the many perplexities, difficulties and fallacies he is likely to encounter in the performance of the tests, and is advised how to overcome them."

Diagnosis by the urine, which every student of the late senior Prof. Heitzmann, and which our late professor originally impressed the profession with the practical importance of, has been allotted a relatively large amount of space, as this department of clinical medicine rightfully deserves.

Another practical characteristic of this volume is the thorough sys-

tem of indexes, by which any specific subject may be found with the least expenditure of time; there are five tables. First, contents, giving chapters with subjects; second, index of tests; third, chapter and page index of leading subjects; and, finally, fourth, index, ordinary alphabetically arranged.

While it is written especially for the practitioner, it is equally useful as a text-book for the student or a reference book for the specialist in this department of medicine.

Its typography, paper and binding is A-one.

The Journal of Ophthalmology, Otology and Laryngology

Vol. XVIII

Lancaster, Pa., and New York, June, 1912

No. 6

EDITORIAL.

DEPARTMENT OF MATERIA MEDICA. FOREWORD.

PHILIP RICE, M. D., SAN FRANCISCO, EDITOR.

WE make our initial bow to the friends and readers of the JOURNAL as a full fledged materia medica department, a department long and sadly needed. How often in the past have we looked for it, but in vain; and how often have we asked ourselves the question: Why is it we do not have an active, interesting and instructive department in our Official Journal to which one can turn for instruction in that branch of science which gives us the only excuse to exist as a separate school of medicine. There does not seem to be any reasonable excuse for not having it. The membership of our school is large enough, even if we are limited to our fraternity of specialists for matter we should still be able to furnish ability and material sufficient and of the quality to make such a department not only worth while, but a great success. If this is not the case then we can scarcely lay claim to having something better to offer suffering humanity than our old school colleagues; and if we cannot offer something better then are we a set of imposters—a horn of the dilemma, we are quite certain, none of us want to sit on. Hence as conscientious men and women it is our duty to carry forward the work, and this department is created for this purpose, and that you may find a free and large opportunity to do so.

At the earnest solicitation of Drs. Moffat and Palmer we have agreed to undertake the task of conducting a Department devoted exclusively to the study of Homœopathic Materia Medica and Therapeutics, and we begin with no little fear and trembling. This is new business for us, and only a confidence in your loyalty to the cause leads into it. In this mind we come and ask your co-operation. We need it, of course,

and just as badly as any other department needs it. We will strive to our utmost to do our part, and if necessary, more than our part, to make this thing a success. Our plans are not fully made as to how the work shall be carried on, time must decide somewhat; but we do know that we shall need articles from you on *materia medica* and therapeutics. Be good enough, therefore, to let us have them. Treat of remedies from the didactic or clinical standpoint as you like, only let what you say be crisp and to the point. Let it be something that everyone will take time to read, and something that will be of value in our daily work. Long, lumbering articles that are "a weariness to the flesh" to read, and that are full of dry bones, we shall hardly find room for. Give us something born of your ripe experience and conscientious judgment. This will be both interesting and instructive.

We all appreciate the need of an improved and more workable *materia medica*; one to which the busy man can turn and without spending the best part of a day find what he wants. This cannot be done with the *materia medica* as it is at present constructed, and we all know it. And we know, too, that this is one of the principal reasons why so many in our ranks have given up the strict homœopathic method of prescribing. There are many who depend almost wholly upon adjuvants and palliatives on account of their inability to learn the effects of our remedies, who yet have the utmost confidence in the superiority of the homœopathic method. This is all wrong and we thoroughly realize it. It shall be the aim of this department to minimize this evil, and we appeal to you, doctor, to assist us. Please do not wait to be asked to contribute an article, but just send one along; one that you believe will be helpful, and rest assured it will be appreciated.

As has been said, our attention will be given to *homœopathic materia medica* and therapeutics; therefore, let no one be offended if we fail to speak of any of the innumerable pharmaceutical preparations that are constantly being presented to the medical profession for endorsement. This is not saying that we discountenance such preparations absolutely, but it is because we feel that they receive all the attention necessary from other sources, and because we feel that *curative medicine* does not receive enough attention these days. It is needless to argue the fact that the homœopathic method of treating disease has been very much neglected for some time, abundant proof of this can be found in our printed transactions. We trust this stand will meet

with your endorsement. If it does not and it can be shown that another is the wiser one it shall be adopted. We are in this for the good of the cause and not for the purpose of riding our hobby.

Plans are shaping themselves in our mind for new and original work in materia medica. These will be announced from time to time as they mature, and in all likelihood many, if not all of you, will be called upon to do some special work to further the science.

Dr. F. de Havilland Hall, in writing the obituary of Sir Henry T. Butlin, Bart., D. C. L., F. R. C. S., who was a general practitioner and surgeon before restricting himself to his chosen specialty, makes the following very practical remark: "If all men, who intend to devote themselves to special branches of the profession, would only have a thorough general training in medicine previously, there would be less of that narrow specialism which does so much harm in many directions."

C. D. Larson, in January *Efficiency*, says: "Eighty per cent. of our business men are addicted to 'nervous rush,' but it does not spell efficiency. On the contrary, it means waste of energy, loss of time, more mistakes, a dull brain and a tired out state of existence. The remedy is poise." (A most terse and comprehensive enunciation of a condition which every physician will emphatically endorse.—ED.)

NEUROSES OF THE EYE.*

FRANK O. NAGLE, M. D.,

Philadelphia, Pa.

HAVING had quite recently a patient who invalidated herself for several years as a result of the symptoms of ocular hysteria developed upon an organic lesion—led me to write upon two common neuroses of the eye, hysteria and ophthalmic migraine.

Perhaps it would be well to give the history of the above case at this part of this thesis. Mrs. S., patient, 57, was well until eight years ago (1903), when she developed intraocular hemorrhages, which in the course of the year rendered the eye blind. A very bad prognosis was given for the sight of the remaining eye by one of our best ophthalmologists. Since then the left eye has been under observation by some of the best men in the city and has been pronounced normal in every respect, vision 20/20. Gradually hysterical symptoms of terrible pains, patient unable to read or write, and finally a spasmodic contraction of the orbicularis muscle, whereby the patient spends the greater part of the day with closed eyes. The hysterical ocular phenomena present were asthenopia, amblyopia, and contraction of the orbicularis. When one reflects for a moment that this patient has required a trained nurse for the past five years and has made herself and her surrounding friends miserable, one realizes its seriousness. This patient had all the landmarks of hysteria major some years before her eye trouble began. Hysteria developing on an organic basis as the above case, is more frequently seen in the foreign eye clinic because of the paternal system of accident insurance in vogue.

The ocular signs of hysteria are probably the most constant, most easily detected and most conclusive signs both of petit and grande hystérie, and a knowledge of the means by which the evidence can be obtained is of great value to the ophthalmologist and the general practitioner. Ocular hysteria is not only restricted to men and women but also to children. Schnabel, of Vienna, reported a number of children between the age of 10 and 14 who feigned myopia by producing an

*Read before the Cleveland Homœopathic Medical Society, Feb. 15, 1912.

accommodation spasm just in order to imitate other members of the class who were near-sighted. It must be remembered that this refractive condition is very common in Germany and known to the laity.

We have had quite recently two cases of ocular hysteria in our clinic.

CASE 1.—C. A., age eleven, has been wearing glasses for three years, because of left eye being crossed. The child was refracted by a general practitioner, who unconsciously impressed upon the child that the left eye was deficient. The child came to the clinic on March 12, 1912, with a history of having lost the sight of the left eye three days previous. Under atropin and proper correction the sight gradually improved within the next month. This was only accomplished by proving to the child that the eye had a sight in it. The child showed no other symptoms whatever of a hysterical nature. That this child had a keen intellect was observed by those who came in contact with her.

CASE 2.—I. M., age 15, came to the neurological clinic on March 9, 1912, with the history of recently having had convulsions. The diagnosis of hysterical convulsions was made by Dr. W. Lawrence Hicks, who referred her to the eye clinic for exceedingly poor vision and narrowed fields. Under atropin a 75 cylinder, axis 90, in both eyes was discovered by my assistant, Dr. Wm. Ryan. Since the time of wearing the glasses, the patient improved rapidly, and has had no hysterical convulsions.

Relatively seldom occurs a bilateral amaurosis (blindness), yet the literature reports quite a few authentic cases. Usually both eyes are attacked simultaneously, and the onset may be gradual or sudden. In most instances form and color sense are lost, although the patient still has sensation of bright light. All cases recover vision sooner or later, hence prognosis *quoad vitam* is good. Mendel records a case of eight months' duration. Oppenheim records a case of a year and a half duration, and within ten years had thirteen re-occurrences. Unilateral blindness is much more frequent, and affects women more than men, proportion being two to one. Unilateral blindness in children is known. This condition comes on suddenly, the well eye retaining full vision, and according to Morax, visual field is somewhat larger than the normal. Concerning the nature of "hysteria blindness," we may say it is not due to any failure of the retina to appreciate the images of external objects, but is due to a functional disturbance of the sub-cortical centers. Prince says the hysterical blind see, but their visual

sensations are not connected with their dominating waking conscience. Amblyopia or incomplete reduction of visual acuity is more frequent than the above mentioned phenomena, the visual acuity being reduced to one-third, one and one-quarter to one-tenth of the normal requirements, and the sight changes from day to day. This form of ocular hysteria is of long duration and is very prone to recurrence. It may precede any other symptoms of hysteria in the patient. Amblyopia is usually accompanied with concentric contractions of the visual field and inversion of the color field, although these two latter phenomena can be present with full vision. The result of concentric contractions of the visual field is tubular sight. It occurs in organic lesions of the eye, retinitis pigmentosa and apoplexy on both sides of the cune. Yet hysterical persons are not inconvenienced by the peripheral reduction of vision. They still retain power of orientation. The explanation is a difficult one. Groenow, of Breslau, states that the peripheral parts of the retina still retain its powers of perceiving large bright objects in spite of contracted visual field. Schmidt-Rimpler claims that each recorded concentric contraction of the visual field should be investigated at varying distances, for a number of cases as the distance between patient and blackboard is increased, the size of the visual field becomes relatively larger.

Foster in 1877 investigated the so-called anesthesia of the retina, which produces the so-called fatigued contraction of the visual field. This is simply a quick tiring of the retina when testing the visual field in a certain meridian certain times. Other visual field phenomena which present themselves occasionally are Foster's shifting or displacement type of field, the oscillating spiral visual field and fatigued scotoma. The extension type of the visual field is rare. Quite frequently we find hysterical asthenopic symptoms. They manifest themselves by the patient's inability to work continuously in the near because of the symptoms of pain. This may manifest itself as a burning or a dryness of the eye. Other pains are located back of the eye, and are boring in character and radiating from the brows. Just as in ciliary pains we often find besides the frontal pains occipital pains, the two being separated by an intermediate zone free of pain. Perhaps the occipital pains represent the terminal endings of a supraorbital nerve. Again a disproportion between the visual acuity for distance and near is frequently present. Monocular diplopia was first recorded by Charcot and Parinaud. Both consider it quite a result of accommoda-

tion spasms. This system is considered quite characteristic for hysteria, but our neurologists at Hahnemann, in Philadelphia, do not lay much stress upon it. Other conditions of the eye which mechanically produce it are dislocated lens and iridodialysis. Binocular diplopia also is found. It is not dependent on any muscular paresis of the external muscles, but rather through muscular insufficiencies becoming manifest. Hysterical blepharospasm is also another characteristic eye symptom. It may be tonic or clonic, transitory, permanent, unilateral, associated with or without pain. Some consider it as concomitant to the pathological tendency of hysteria, namely, in producing contractures. Even before the days of modern ophthalmology, it was noticed that spasm of the orbicular muscle was associated with amaurosis. Hysterical photophobia not necessarily associated with spasm of the lid muscle, is a common experience in hysteria, and may be so marked as to give rise to a suspicion of an organic disease. It is generally found exaggerated during an ophthalmic examination and the patient may complain of pain.

The pupillary phenomena are not considered as characteristic as formally believed. Strumpel considered a differential point between an attack of hysteria and epilepsy was the absence or presence of the direct light reflex. Karplus experimented with a series of undoubted hysterical patients and observed rigid pupils of short duration, the longest case being twenty seconds. This was later corroborated by Westphal and Bernheim. Later Karplus noticed pupillary immobility during hysterical attacks. The most frequent pupillary phenomena is a dilated pupil quickly reacting to light. Of less frequent occurrence are hysterical paralysis and hysterical ophthalmoplegia, but these cases are not accepted without some doubt as to other conditions beside hysteria being present. Anesthesia of the conjunctiva especially of the left eye is considered an especial characteristic symptom of hysteria by the French author (Briquet). But we must consider that the sensibility of the conjunctiva varies.

The second neurosis of the eye is one which the busy general practitioner meets at least every week. It represents a class of patients whom he sends to the oculist for glasses, but at last it is only exceptional that glasses are of any avail, that is, in the sense that glasses are a curative agent. Of course, if an error of refraction exists besides the neuroses of which I speak, naturally those eye symptoms will be cleared up, since exceptionally refractive errors may become a reflex to ophthalmic migraine.

Ophthalmic migraine has many names. It is called ocular migraine; migraine ophthalmique by Galezouski; scintillating scotoma; amaurosis partialis fugax (Forster); transitory amblyopia; teichopsia, and by the Germans flimscotoma. There are many varieties of migraine:

1. Ordinary migraine, the ordinary sick headache.
2. Ophthalmic migraine, where the symptoms are mostly confined to the eye and supraorbital regions.
3. Ophthalmoplegic migraine.
4. Psychical migraine, in which the mental symptoms predominate, such as temporary hallucinations.

Naturally, these forms merge into one another and in reality predominance of certain group symptoms makes up the classification. The visual symptoms in ophthalmic migraine are amblyopia; scintillations; scotoma; hallucinations. From Charcot's time the French and German physicians have mostly given their attention to this affection, yet from statistics it is decidedly more common in America. Personal experience has borne out this statement. There is no place in the world where so much attention to the relation of eye diseases to neurology is given as in Breslau, Germany, with Prof. Uhthoff, yet with all his clinical material it was exceptional to see a case of ophthalmic migraine. Whereas, in our eye clinics at Hahnemann we refer several cases of ophthalmic migraine to the nervous clinic every week.

Amblyopia may be a simple blurring of the visual field. Probably this is the more commonly found in ordinary sick headache where the whole visual field becomes momentarily dark. Some authors claim actual presence of blind spots in the visual field. Under amblyopia we may speak of transitory hemianopsia. This is a condition of half blindness, and is usually symmetrical, affecting half of the visual field of both eyes. This phenomena can assert itself to the patient with a distinct line of demarkation, passing through the fixation point, or just as a darkening of the temporal field of vision. There are cases on record where only the upper quadrants of the visual field were affected. The complaint of the patient would be characteristic, only half of an object is seen when looking straight forward. It may be of interest to know that transitory hemianopsia was first brought out at the Heidelberg Congress in 1869 (Vater-Heinecke), who presented three cases. One of these cases was of interest because of the

hemianopsia lasting an hour. This is exceptional, the phenomena of half blindness usually being of ten or twenty minutes' duration. Galezowski recorded an unusual case which lasted for five months without any objective findings, but this may be neurotic in origin, as we often find hysterical symptoms in a migraine patient. Permanent damage to vision in ophthalmic migraine is very rare. There are cases on record where transitory blindness occurred in both eyes. We must not forget other organic conditions may be underlying the migraine. This brings us up to the question of whether migraine predisposes to epilepsy. Undoubtedly the differential diagnosis between these two latter conditions is at times very difficult, when we consider that migraine is usually preceded by an aura, followed by momentary attacks of aphasia, a numbness usually on one side of the body, which may lead to hemiplegia, vomiting, and at times loss of consciousness.

The consensus of opinion is that migraine is not the precursor of epilepsy. Hibble in a series of 1,500 cases of migraine followed for a considerable length of time did not trace a single case ever developing into epilepsy. For further information I will refer you to an article written by him in the transaction of A. M. A. in an article on the relation of so-called migraine to epilepsy.

Scintillation consists of zig-zag lines of a lightning character appearing whether the eyes are closed or not. They sometimes precede the attack, and are found quite frequently present in migraine sufferers. Hallucinations are rarely found. I have never seen a case.

When ocular palsies occur the course of the disease is more serious. Charcot called this ophthalmiplegic migraine. Migraine attacks, according to Charcot and Galezowski, are occasionally a forerunner of paresis and tabes. In making the diagnosis of migraine we generally find a history of migraine being in the family. Again, migraine makes its appearance in the period of adolescence, 15 to 25. The attacks continue regularly for a number of years and disappear about 40 to 45. They are milder in type with longer intervals of freedom the older the patient gets. The attacks may become quite frequent followed by a comparatively long interval of freedom. The accompanying nausea has nothing to do with an acute attack of indigestion. A migraine attack lasts from one to three days, and is accompanied by hypersensitiveness of the special senses, noises aggravate, likewise bright light. Patient naturally prefers darkened room and absolute rest in

bed. The best remedy for the attack is sleep. The patient is usually quite collapsic during the attack. Migraine is always followed by extreme exhaustion. Later authorities consider migraine as an explosion sensory in origin, while epilepsy is a nervous explosion of motor origin.

From the very fact that this migraine neuroses tends to clear up after running its course of many years, you would infer that treatment is of little avail. It is true we hardly know how to treat this neurosis from a pathological standpoint, for its pathology is unknown. For a time muscular imbalance of the eyes was sought as the cause, therefore, therapeutic measures consisted in the application of prisms and operative procedures. This is now not practiced. From experience gained in our vast clinical material at Hahnemann Hospital, in Philadelphia, we have found homœopathic remedies of positive help provided they are persisted in for a considerable length of time, and in obedience with ordinary rules of strict regular hygienic living. Of these remedies I may mention *ignatia*, *gelsemium*, *nux moschata*, *nux vomica*, *iris versicolor*. Some standard old school text books are so unconsciously homœopathic that they recommend *ignatia* in very minute doses. In closing, I take this opportunity of thanking my friends, Drs. William Lawrence Hicks and Charles Fox, of our neurological clinic at the Hahnemann dispensary of Philadelphia, for their hearty co-operative work in the important field of the relation of eye diseases to neurology.

1825 Chestnut Street.

REPORT OF A CASE OF INFECTED DENTIGEROUS CYST.*

GEORGE W. MACKENZIE, M. D.,

Philadelphia.

PATIENT, T. W., male, age 44 years, reported to me December 1st, 1911.

History: Two years previously the patient noticed for the first time a swelling, the size of a small marble, in the left cheek. He indicates the exact location by pointing his finger to the canine fossa. When first noticed the swelling was not painful nor had he suffered with toothache. In fact, so far as he could recall, every tooth in the upper jaw of the left side was perfectly sound.

The swelling gradually increased until six months ago, when it had reached the size of a shellbark. It had remained hard and was not painful.

During the last two years the patient has had an intermittent discharge of fluid from the swelling into the left buccal cavity. The discharge was not offensive in odor until about five days ago. Immediately following the discharge the swelling would diminish in size for the time being.

About three weeks ago the patient had the left upper median incisor removed (a sound tooth) and the adjacent lateral incisor filled. Five days ago the patient began to suffer pain in the swelling, and the discharge that followed was offensive in odor. Two days later he reported to his family physician, who made two incisions into the swelling immediately above the alveolar process, corresponding to the region of the second bicuspid and first molar, letting out a half teacupful of offensive secretion. He was referred to his dentist, who on the following day (two days before I first saw him) removed the first bicuspid and second molar, followed by a slight diminution of pain from which he had been suffering. He claims that he had not suffered from any fever during the last five days; however the temperature had not been noted.

The patient claims, furthermore, that he is not particularly subject to

*Written especially for the JOURNAL.

colds in the head, and breathes freely through both sides of the nose, and has not suffered from unilateral discharge from the nose.

Present Condition: Patient is a robust looking, middle-aged man. Left cheek more prominent and slightly redder than the right. By palpation through the cheek, was noted, a fairly firm circumscribed and immovable swelling, the size of a walnut, but somewhat flatter, extending from the opertura pyriformis lateralward to a point just below the most prominent portion of the malar bone, and from the alveolar process upward to a point near the inferior margin of the orbit, occupying completely the canine fossa. By palpation in the mouth the same outlines were corroborated. Pressure over the swelling elicits tenderness, as does also pressure on the lateral portion of the hard palate. The left upper jaw shows the absence of four teeth, middle incisor, the two bicuspid and the second molar, three of which had been removed recently as noted above; the fourth may have been removed earlier in life, but the patient cannot recall it. A fistula from the alveolar process corresponding to the region of the first bicuspid (which had been removed) leads upward into the cavity. Upon passing a blunt probe into it, it was found to correspond in location and size to that of the swelling. The external wall was found to be quite thin. With a blunt probe the cavity appeared to have smooth walls lined with soft tissue. No raw bone was detected. Upon withdrawing the probe a teaspoonful of foul pus followed and not one drop of blood. A second examination with finger externally failed to reveal any crepitation or parchment-like yielding of the bone.

Nose: Slight deviation of the septum to the right. Mucous membrane slightly reddened. Very moderate degree of hyperplasia commensurate with that found in the average individual of forty-four years. No bulging of any part of the lateral wall of the nose on either side could be found.

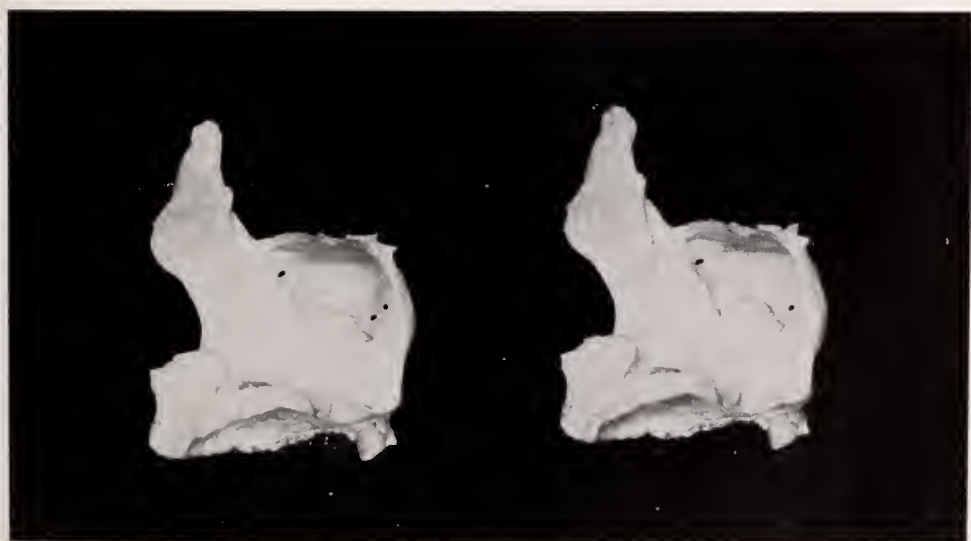
Pharynx: Slight degree of secondary catarrhal pharyngitis.

Upon questioning the patient again concerning toothache, he denied having had any toothache on the left side during the last two years.

One thing that struck me as peculiar when he mentioned it was the fact that when the dentist, three weeks previously, drilled the lateral incisor and removed the live nerve the operation was painless.

The diagnosis of Dentigerous Cyst was made and operation advised.

Accordingly he was operated the following day (December 2d, 1911) at the West Philadelphia Hospital. I had the able assistance and con-



sultation of Dr. E. B. Gleason, of Philadelphia. The patient was given a general anæsthetic, ether being employed.

Operation: An incision was made just above the alveolar process of the lateral incisor backward, about two and a half inches, to that of the last molar. The periosteum elevated upward over the whole swelling, the cavity was entered by the use of a number ten Alexander chisel. This opening was enlarged by means of a middle-sized Luer bone forcep. The entire bony lateral wall was removed after the same manner, when it was found that a goodly portion of the root of the first molar, bared of its periosteum, was found extending upward into the cavity. This tooth was extracted. The third and fourth molar roots did not present themselves into the cavity and accordingly were not disturbed. The cavity, though not containing any granulations, was curetted freely with a sharp spoon, and found to be large enough to accommodate a hulled walnut. With the finger and subsequently with a firm probe, the remaining walls were found to be firm and unyielding. No opening could be found communicating with the maxillary sinus, the nasal cavity or the orbit. Indeed the cavity was so large that it appeared as though it must occupy the whole of the maxillary sinus. We had therefore a blind cavity within the antral cavity, yet holding no relation to it. The wound was dressed openly with moist iodoform gauze strips.

The patient made an uneventful recovery from the operation. He had no rise of temperature, was discharged from the hospital in forty-eight hours, and claims to have had relief of all symptoms immediately following the operation.

Re-dressings were made with iodoform gauze every other day for several weeks. The size of the cavity did not diminish. The cavity always remains clean, there being no mucous or other discharges at any time.

Because of its interesting nature, the case was shown at the March meeting of the Philadelphia Laryngological Society.

A week or so later I decided to operate a second time, with Schleiche infiltration anæsthesia, and attempted to remove all of the mucous membrane lining in the cavity, much as we do in preparing the septum for the submucous operation. At this operation the entire mucous membrane of the cavity was removed without pain to the patient, leaving nothing but the bared bone. Just before the operation a photograph of the cavity was attempted, but unsuccessfully.

The after treatment was the same as after the first operation. The epithelium has since migrated from the edge of the opening and has lined the cavity completely. The size of the cavity has diminished but slightly. The case was shown to Dr. Phillips, of Cleveland, and Dr. Haseltine, of Chicago, during their recent visit to Philadelphia.

Despite the fact that we have a fairly large cavity remaining (size of a shellbark), the cavity has always remained clean; no food gets into it, nor does the patient suffer any inconvenience, other than the knowledge of the fact that this cavity exists.

DISCUSSION OF THE CASE.

(1) The Dentigerous Cyst in this case was sterile for two years or longer, and was not infected until some time between five days and three weeks before I first saw the patient. This fact is supported by the history of intermittent *non-offensive* discharge for two years or longer, together with the *absence* of pain or other discomfort for a corresponding period of time.

That such cysts do form and increase in size for a long time and remain sterile agrees with the findings of Mallasez and Scheff.

(2) This previously sterile cyst became secondarily infected with pathogenic micro-organisms at the time the patient began to note pain, accompanied by offensive discharge.

(3) The source of the infection of Dentigerous Cysts is usually through caries of a tooth; the infection finding its way into the cyst through the infected canal of the root. The probability of such an infection in this case is supported by the history of a dentist finding a cavity requiring attention in the lateral incisor. He drilled out the tooth, removed the pulp and nerve, and subsequently filled it.

(4) The dental work on the lateral bicuspid was painless. I also learned later (but not noted in the history) that the extraction of the other teeth on that side was painless. This was probably due to the destructive pressure of the bony cyst on the nerve filaments supplying the teeth, which had occurred so gradually that the patient was unaware of its occurrence. Although I did not open the floor of the cyst to determine the fact at the time of the operation, the possibility is that the floor of the cyst and the floor of the sinus were in intimate contact.

(5) Intermittent discharge through a fistulous opening in the lower portion of the canine fossa occurred in this case for a period of two years. Dentigerous Cysts in this region most frequently show the

external wall to be rather the thinnest, and most likely to yield to pressure from within. However, cases have been cited where Dentigerous Cysts have evacuated themselves through the natural opening of the maxillary sinus into the nose; in such cases they have been mistaken for so-called Hydrops Antri Highmori.

(6) The Dentigerous Cyst had no pathologic connection with the Maxillary Sinus proper. The only relationship seems to have been a physical one, in that the Dentigerous Cyst formed about the root of a tooth, probably the first molar, and expanded in all directions, including inward toward the sinus, displacing largely the cavity of the sinus. At no time was there primary or secondary involvement of the sinus. This fact was evidenced by the history and the findings at the operation.

(7) Pressure over the cyst in the region of the canine fossa failed to present the typical parchment-like yielding of its thin bony wall with crepitation, frequently found in such cases. This sign was absent, perhaps because this wall had not yet thinned out sufficiently.

(8) Tenderness to the pressure of the palpating finger was an evidence of inflammation resulting from the secondary infection of the cyst, its outline being quite sharp and distinct.

(9) At operation the cyst was found to contain pus and debris, in addition the root of the first molar was found to extend quite a distance into the cavity and bare of periosteum. This finding suggests that this was the root about which the cyst probably originated, although it is difficult to prove it from the fact that other near-by teeth had been removed, and a study of them and their relation to the cyst was impossible.

(10) The absence of a tooth that could not be accounted for leaves some room for a question as to its probable relationship to the formation of the cyst. It is possible that the cyst might have formed from the enamel germ of this non-erupted and non-developed tooth.

(11) Absence of blood mixed with the purulent discharge prior to operation speaks for the absence of granulations within the cavity; therefore an intact epithelial lining. This was corroborated at the operation.

(12) The prompt relief of pain following the operation suggests that the pain before operation was due more to pressure within the cavity of its suppurating contents than to an actual inflammation of its epithelial covered lining.

(13) In spite of our apparently vigorous curettement of the cyst

wall the epithelial lining was not totally destroyed, for not long (10 days or two weeks) after the operation the cyst had a smooth epithelial lining.

(14) The epithelial lining was evidently of low grade, resembling more the pavement-like quality than the pure mucous type, from the fact that the cyst would remain quite dry when the dressings were allowed to go as long as three days. Unfortunately I did not examine it microscopically. Furthermore from the etiological standpoint we would expect to find it so.

(15) The secondary operation, of submucous resection of the membrane lining the cyst cavity, failed entirely to bring about the filling up of the cavity with granulations. I might possibly try at some future time some other form of operation; paraffine infiltration or paraffine-iodoform infiltration or obliteration of paraffine sac-wall combined with fat infiltration. These are questions which I am still debating in my mind.

Concerning the subject of bulging of the maxillary sinus walls, including ectasia of the canine fossa, Zuckeraudl, in his work on the *Anatomie der Nasenhöhle*, Vol. II., Sixteenth Capitel, page 169, in treating of the subjects of Zahn Cysten (Dentigerous Cysts), Empyema and Hydrops Antri Highmori, claims that all three conditions may cause a bulging of one of the maxillary sinus walls and the differential diagnosis is not always easy. Then he quotes from E. Alberts (*Lehrbuche der Chirurgie*), which in effect is as follows: In practice conditions are often designated as Hydrops Antri which, in fact, are not Hydrops. It is produced by any disease process (polyps and the like), which leads to a stoppage of the ostium maxillare and retention; the continuance of which leads to a pressure against its walls with consequent distension. One finds a swelling of the cheek in the region of the canine fossa and the palpating finger in the mouth detects a rounded swelling in the canine fossa immediately above the alveolar process, which yields like parchment. The older surgeons who practiced the opening of the swelling found that it contained mucous and occasionally pus.

The Verschluss theory (that is, the theory of closure of the ostium with polyps and the like) was discarded and in its place they adopted the theory of cystic degeneration of the sinus mucous membrane as the cause of Hydrops. They believed that the mucous glands in the sinus, in rare cases, were transformed into large thin-walled cysts—cysten polypen (cystic polypi).

In other cases there occurs a chronic sub-periosteal abscess, the result of caries of a tooth. The periosteum which forms the anterior (outer) wall produces bone lamella, and when one extracts the tooth out gushes a quantity of pus, exactly as occurs in cases of assumed Hydrops Antri.

In a third case, from the abnormal development of an unerupted tooth, either in its proper location (lying in its socket) or a germinal misplaced tooth, there can develop from the enamel sac a Dentigerous Cyst. The cyst contains mucous-like fluid and can reach the size of a walnut or even the size of an orange. When the canine or bicuspid are involved the cyst can assume the picture of Hydrops Antri.

Alberts says further that some authors go so far as to deny altogether the existence of Hydrops Antri. These authors claim that all cases of so-called Hydrops belong to one of these three conditions—cystic polyps of the Highmore's cavity, subperiosteal abscess and Dentigerous Cysts. Alberts leans rather to this view and puts the proof of the existence of Hydrops up to those who believe it by asking them to prove it, while he claims that the existence of the three above-mentioned conditions have been proven. He cites a case, reported by Werner, where the cyst, so completely, filled out the sinus cavity and moulded itself into the same shape as the sinus, while the cyst emptied itself into the nasal cavity.

Zuckerkandl, in speaking of the causes which lead to ectasia of the sinus walls and the question of Hydrops, says that ectasia of the sinus wall is not the rule, and he questions whether an accumulation of fluid in the sinus can produce a bulging of its walls. He points out the fact that the inner wall of the sinus is weakest in the middle nasal fossa in the region corresponding to the *pars membranacea*. In view of this fact he doubts very much whether a simple accumulation of fluid could cause an ectasia of the inferior nasal fossa or the canine fossa. He is liberal enough, however, to add that the experience of the practicing physician is to the contrary, *i. e.*, the bulging of the median wall does not occur as readily as the facial. Zuckerkandl finally concludes the subject of Hydrops by denying its existence, saying that Hydrops Antri in the true sense of the word does not occur, and adds that the numerous claims concerning Hydrops Antri are false interpretations; and the question arises as to which of the affections of the sinus has been mistaken for it.

Concerning the origin of Dentigerous Cysts, we have two theories—that of Magitot and that of Mallasez.

Magitot *Die Cysten des oberkiefers, etc. Zahnarzth. Abhandl. ausland. Autorit. Heft 3, Berlin, 1888.*

"Theory according to one of us with numerous opportunities." He claims that every so-called periostitic cyst is produced from swelling of the tissues, which form the periosteum and alveolar ligament, about the root of the tooth. He emphasizes the fact that the cyst is formed at the extremity of the root; in fact, where the canal of the tooth opens into the tip of the root.

In speaking of the relationship of Dentigerous Cysts to the maxillary sinus, he says that the formation of the cyst sac is exceedingly slow, that the bony wall of the sinus is elevated and the cyst cavity builds a cavity within the sinus which may, in some cases, displace the cavity of the sinus so effectually that it may be difficult to distinguish the one from the other; however, a close examination will show that the cavity is lined with two envelopes: the outer composed of mucous membrane of the sinus proper and an inner one of the cyst wall. He cites one instance of this kind where in spite of the apparent emplacement of the sinus by the cyst he was able to find a trace of the sinus in an area remote from the cyst. In another case he found the cyst incompletely covered with a bony shell which ruptured and discharged its contents into the sinus.

Theory of Mallasez—*Compt. rend. u. mem. de la Soc. d. Biol., 1887*—attributes the development of tooth cysts to the theory of epithelial remnants of the enamel germ and is supported by the exhaustive researches of G. Scheffs—*Ueber das empyem der Kieferhohle, etc., Wien, 1891.*

He points out that on the tip of the root in diseased teeth one finds, not rarely, small cystic swellings, in the cavity of which may be seen the end of the root bared of its periosteum. The cyst wall consists of connective tissue lined with pavement epithelium, the epithelium extending here and there as projections into the connective tissue.

This pavement epithelium of the sac is derived from the epithelial rests of the enamel germ, incited to proliferation through the stimulating influences of inflammatory irritation.

Appended to this paper are two stereoscopic pictures of the right superior maxilla, which shows two Dentigerous Cysts, the smaller one in the region of the lateral incisor and a larger one in the region of the molars.

In the first picture may be seen the cysts viewed from the lateral

aspect. In the second picture may be seen the larger cyst occupying a fair portion of the maxillary sinus. The cyst wall, presenting in the maxillary sinus, is intact.

The photographs were taken by the author from a specimen in his collection. To be seen to the best advantage, they should be cut out, and pasted on stiff cardboard and viewed through a stereoscope.

The Professional Bldg.,
1831 Chestnut St.

Influence of Salicylates on Thyroid Activity.—Waller (*British Medical Journal*) in order to prove his contention that salicylates have a powerful influence against thyroid activity gives three cases for example. For instance, a robust adult had an acute tonsillitis. He had stuck to his work for three or four days when Waller first saw him one morning. He had then taken to his bed with a pulse-rate of 120 and temperature 102 F. He had headache and aches and pains in the limbs severe enough to suggest rheumatism, but possibly only influenzal. He was given a mixture containing 15-grain doses of sodium salicylate and $\frac{1}{2}$ -grain doses of compound tincture of cinchona. But owing to variations in the size of the domestic tablespoon, he repeatedly took a larger dose, roughly, 20 grains of salicylate and 40 minims of bark, every four hours. He then had a (morning) pulse rate of 48 and temperature of 96.4 F. He had sweated profusely the first night, and his bowels were obstinately constipated, resisting strong doses of aperient. The pulse and temperature remained at this low level all the next day, and the bowels were still obstinately constipated in spite of aperients, though the salicylate mixture had been left off. Thyroid, $2\frac{1}{2}$ gr., twice a day, was then given for two days, and the temperature again rose, this time to nearly 101 F., and the pulse to 98. The throat progressed rather slowly in spite of energetic antiseptic treatment which had given excellent results in other cases. The patient returned to work twelve days after the author first saw him, when in spite of full doses of strychnin he had a very soft dirotic pulse of 76 and a blood-pressure of only 100 mm. mercury.

TUBERCULOSIS OF THE NOSE, THROAT AND EAR.

WILLIAM H. PHILLIPS, M. D.,

Cleveland, O.

NOT having read the other papers of this symposium it is more than likely that I shall repeat here some things which have already been said. Tuberculosis as found in the upper air passages and its contiguous structures, as the ear, presents two distinct types: First, the granular, miliary, or ulcerative type; and, second, lupus. The first is an active, destructive process accompanied by marked constitutional and local symptoms, practically always shows the tubercle bacillus present, and tends toward a rapid dissolution of the patient. It is practically invariably a secondary infection from pulmonary lesions, is a common affection of the larynx, an occasional invader of the pharynx, and only comparatively rarely involves the nose or ear. Lupus, on the other hand, is a sluggish inactive lesion, slowly destroys the tissue invaded and leaves in its wake fibrous connective tissue scars. It is practically always a local tuberculosis, persisting for years without producing much local discomfort unless secondary infection occurs, is not accompanied by pulmonary or other general tubercular infection except in its late stages, and the tubercle bacillus cannot be readily demonstrated in its lesions. The seat of the primary lesion is nearly always the nasal meatus, spreading thence over the pituitary membrane to the naso-pharynx, ear, pharynx, larynx, or, by way of the lymphatics, to the cheek, preauricular or submaxillary region.

Granular or miliary tuberculosis of the upper air passages does not ordinarily present any difficulty in diagnosis. Its lesions are dense infiltrations, ulcerations, and occasionally tumor formations, although these latter usually belong to the slower type of tuberculosis. From the fact that lung lesions are practically always present, that the tubercle bacillus can with a little care be almost always demonstrated, that constitutional and marked local symptoms and changes are present, one ought not to be deceived long.

The laryngeal lesions of this type of tuberculosis, from the frequency of their occurrence, are probably familiar to all of you and I shall not

waste much time therefore in describing them. Here as elsewhere it has a predilection for cartilage, and the arytenoids, cricoid and epiglottis together with the vocal chords bear the brunt of the infection.

Tubercular infection of the pharynx is much less common and may be confined to the tonsils and pillars, or may involve the entire mucous structure of the pharynx and mouth.

CASE 1.—Man, *æt.* 45, who had been actively engaged in business until two weeks before I saw him, complained of much pain and aching in the pharynx and marked dysphagia. He had had a sore throat for six weeks, had lost much flesh, which he said was due to the fact that for two weeks he had eaten practically nothing. There was no hoarseness present. Had always been well and strong and is an ex-army officer. No family history of tuberculosis. Examination showed many shallow, grayish ulcers on the soft palate, pillars, pharyngeal wall and tongue; a general pallor pervading the entire mucous membrane, and some swelling and ulceration of the epiglottis. No glandular enlargement could be made out and no skin eruption was present. Has had a diarrhoea and excruciating pain in the rectum when at stool now for four weeks. Temperature 103 and pulse 100. One's first impression on seeing the lesion was that it was a case of secondary syphilis, but the high temperature, severe pain, the absence of glandular involvement, the pallor of the mucous membrane, the loss of flesh, the evident intestinal and rectal infection, the presence of pulmonary lesions and lastly the presence of the tubercle bacillus in large numbers in the lesions showed its true nature. A diagnosis of acute miliary tuberculosis was made and later confirmed by Dr. H. D. Bishop, to whom the patient was referred for rectal examination, extensive ulceration from which the tubercle bacillus was recovered being found there also. The patient died some six weeks later.

CASE 2.—Man, *æt.* 72, had complained of sore throat for several weeks with much aching and pain on swallowing. Had lost flesh and strength rapidly. Inspection showed a pale mucous membrane, infiltration of the posterior pillar upon the right side from its palatal to its pharyngeal attachment, and a pale, soft, edematous tonsil. The laryngeal mirror showed the same condition existing in the arytenoids and epiglottis. Chest signs were positive and a slide clinched easily the diagnosis. Yet this man had been treated for six weeks for tonsillar and peritonsillar abscess, and the tonsil incised in all directions. He too died a few weeks later.

In the nose, infiltration, gray ulceration and tumor growths springing from the cartilaginous septum or turbinals are the characteristic lesions. I have seen but one case of what was probably a granular nasal tuberculosis. A young woman, *æt.* 21, complained that for the past six months the left nasal cavity had become increasingly blocked, that she had chronic sore throat, and there was inability to use the voice as formerly. She had been a singer of considerable ability. Two years before she had been sent home from boarding school with a diagnosis of incipient tuberculosis which, however, had not been confirmed by her family physician here. Inspection showed an enormously enlarged inferior turbinal, pale and filling almost entirely the nasal space. The tonsils, especially the left, were large and pale, and full of cheesy debris, and there was some tenderness and prominence of the deep lymph glands at the angle of the jaw. Indefinite signs of an apical catarrh were present. Temperature varied from normal to 100. Slides from the nose, pharynx, tonsil and sputum at this time were negative so far as the tubercle bacillus was concerned, but a Calmette was promptly positive. The turbinal was resected close to the wall, and the tonsils enucleated and the patient put upon tuberculin. The turbinal wound was months in healing; in fact, never healed completely, a small gray ulcerating surface remaining which tended to scab over and then break down. She was returned to her family physician who urged her to leave Cleveland, but she did not and two years later died of a pulmonary tuberculosis. Unfortunately the specimen obtained was not submitted to the pathologist for a report, but clinically there was no question as to the local diagnosis.

In the ear the tubercular process is usually an extension up the tube from the naso-pharynx and partakes largely of the characteristics of a tubal catarrh. Its progress is slow and insidious, and is well illustrated by the following case: Mrs. X., *æt.* 52, showing signs of an apical catarrh, developed a feeling of fulness in the right ear followed in twenty-four hours by a watery discharge from the ear without pain or other discomfort than the fulness. Within two or three days the discharge ceased, to be followed in a short time by the sense of fulness again and recurrence of the discharge. After two or three repetitions of this cycle I saw her. Inspection showed a pale and sodden drum-head, a small linear perforation in the anterior inferior quadrant, and a small amount of sero-mucus in the canal. Inflation drove out a small amount of the same secretion from the tube. A slide failed to

show any infecting agency, although stained for the tubercle bacillus. She was carrying a temperature at this time from 99 to 100, and was receiving from another source suitable care and instruction for her pulmonary trouble. For about six months, the period during which I saw her, she had constant repetition of the cessation and recurrence of the discharge without pain of any kind. The fact that the bacillus was not demonstrated in the discharge does not annul the diagnosis of tubercular otitis media, as we know that it is impossible to demonstrate the infecting agent in many of these cases which animal inoculation nevertheless proves are tubercular. Patient died about a year later. A painless, obstinate, subacute otitis media, occurring in the course of a pulmonary, laryngeal or pharyngeal tuberculosis, or a nasal lupus, is very liable to be tuberculous, and may, in case of secondary infection, be associated with extensive bony destruction, the mastoid or entire petrous pyramid being destroyed.

Lupus.—Originally lupus was considered a skin tuberculosis and as only secondarily invading the air passages. Today it is considered largely as primarily a disease of the nasal vestibule, the skin lesions when present being a lymphatic metastasis. Its primary lesion is the mamillary or mound-like infiltration beginning in the vestibule from direct infection, later slowly involving the pituitary membrane over the cartilaginous septum, turbinals and floor of the nose, and finally the entire upper respiratory tract. Tumor growths, ulceration, perforation of the cartilaginous septum, scabby formations, adhesions and resulting atresias occur later. Involvements of the tympanic cavities and lacrimal sacs are frequent. The so-called lupus exedens or vorax is probably a secondary infection, usually staphylococcic, grafted onto a lupus.

CASE 4.—Lupus of the nose and pharynx. Woman, æt. 30. Three years before had had a mastoiditis, from which time she dates all her nasal and pharyngeal trouble. She blows much muco-purulent material from the nose and the naso-pharynx seems full of a tenacious mucus difficult to get rid of. She is hoarse, loses her voice, and has choking spells relieved by raising large masses of dried exudate from the larynx. Epiphora is well marked. Inspection of the nose shows pallor of the mucous membrane which is covered with thick tenacious muco-pus, adhesions between the septum and inferior turbinals, and a marked narrowing of the meati anteriorly. The soft palate is adherent, except in the region of the uvula, to the pharyngeal wall; is red

and atrophic, and the larynx presents the picture of a chronic atrophic laryngitis. An X-ray plate failed to show the presence of any infection of the accessory sinuses, nor could any be demonstrated by the probe. There was no history, nor were there other lesions of syphilis, nor did K. I., given for six weeks, have any beneficial influence. A Von Pirquet test was promptly positive. Repeated slides failed to show anything but a few staphylococci. The eustachian tube on the left side was full of the same viscid secretion and could be blown out through the drumhead in large quantities. There were no changes present characteristic of rhino-scleroma nor could the Frisch bacillus be demonstrated. Tuberculin and staphylococcus vaccine used on this patient for three months seemed to do much good. The discharge lessened markedly, the scabby accumulations in the larynx and the hoarseness and choking disappeared. Her home not being in the city, it was an effort and no little expense for her to come to see me, so naturally she ceased regular visits as soon as she began to be relieved. However I have seen her twice since she ceased treatment and the relief obtained still remains. No Wasserman was made on this patient, but there was neither history nor other clinical indications of syphilis, nor did the K. I. seem to have the slightest effect, although she took toward the last 60 gr. b. i. d.

I saw this summer a patient who came to the city hospital with a diagnosis of lupus of the pharynx made by two nose and throat men of our city. The right tonsil and a portion of the posterior pillar had entirely disappeared and the deep cavity was filled with foul sloughs, no history of a tonsillectomy having been performed. He had been in service in the Philippines for two years, returning to this country about a year ago. He had had a sore throat for six months, the past month had been confined to his bed in one of our large hospitals. No specific history and no signs of pulmonary tuberculosis. Had lost much flesh. Temp. now 102-3°. No other lesion of the nose or pharynx present. A cutaneous tuberculin test was negative, a Widal negative slide showed only staphylococcus (not examined for spirochaetæ), and a Wasserman was very positive. His temperature continued to rise; deep injections of mercury did no good; he developed an obstinate constipation with great tympanites, rigidity of the neck; delirium, and died two weeks after admission. No post-mortem was obtained, but evidently the case was not lupus but a tertiary syphilis followed by infection, septicemia and septic meningitis. While lupus

with a secondary infection might produce such destructive ulceration, it is hardly likely that it would exist without other lesions elsewhere. Had a tonsillectomy been done it would have seemed like an infection following operation, but the duration of the disease, six months, again would have eliminated that factor. The negative tuberculin test at this stage would not militate against the diagnosis of lupus, in the earlier stages, in my judgment it would. A positive tuberculin test I consider merely confirmatory of clinical findings. In closing I may say that the clinical diagnosis between syphilis and lupus is at times most difficult, especially inasmuch as they may and frequently do co-exist. Again, I shall quote from Gaboche: "There are three early symptoms which, when associated, should always make us suspect an existing lupus of the vestibule or pituitary membrane, lacrimation, a rebellious impetigo or eczema of the vestibule, and a torpid or recurrent lymphangitis of the nasal lobule."

1018-1020 Rose Building.

Corneal Opacity Due to Lead.—An ingenious and novel treatment for the dense white corneal opacity which follows the treatment of ulceration of the cornea by lead salts is recorded in the ophthalmoscope by Major Elliott. The patient, a Hindu woman, had treated herself for an inflamed eye with three successive applications of sugar of lead dissolved in rose water. The inflammation duly subsided, but a dense white plaque remained on the cornea, for which she wanted relief on æsthetic grounds. The author scraped the ulcer freely, but without materially affecting the opacity. He then irrigated the eye with a weak aqueous solution of sulphuretted hydrogen, when the white patch at once turned brown. Although the cornea remained just as opaque as before, the opacity was now no longer obvious to every beholder, though still quite evident on close examination. The patient was so satisfied with this result that she declined all further treatment and has not since been seen. Major Elliott is not aware that anyone has forestalled this resourceful utilization of the elementary chemistry learned in the early stages of the medical curriculum, but thinks it possible that it is so. At any rate, the dodge is one worth remembering, though it might not be so successful.

DIFFERENT TYPES OF MASTOID AFFECTIONS.*

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SO much has already been written concerning the different affections of the mastoid that I feel like apologizing for selecting this subject for the paper about to be presented to you. To those gentlemen present who have given to the ear special thought and study, most, if not all, of the following paper will be repetition. I hope, on the other hand, that to the busy general practitioner the remarks about to be made concerning the mastoid may assist him to a better understanding of diseases of this region, and also help him in deciding how best to deal with such cases.

An inflammation of the membranous lining of the mastoid cells is always present in acute suppuration of the middle ear. This is readily understood if one bears in mind that the membrane lining the cells is a direct continuation, therefore a part of the membranous lining of the tympanum. Furthermore, in these cases of acute suppurative otitis media there is also pus in the mastoid cells as well as in the middle ear. This is explainable by the anatomical fact that an opening in the posterior superior part of the middle ear directly communicates with the antrum (the large cell in the upper part of the mastoid) through a canal known as the *aditus ad antrum*. Therefore, if pus be present in the tympanum and the recumbent posture is taken, the pus by gravity flows into the antrum and from there may disseminate itself throughout the mastoid. Therefore, in treating a case of acute suppurative otitis media, because the patient also complains of pain and tenderness behind the ear, one need not be greatly alarmed, and immediately conclude that a mastoid necrosis is occurring, because in most of these cases, through the assistance of nature and proper treatment, the mastoid symptoms usually promptly disappear as soon as the acute inflammatory reaction in the middle ear begins to abate. This mild type of mastoid involvement accompanies many of the cases of acute suppuration of the middle ear. With rest, laxatives to keep the bowels open, good drainage from the middle ear, irrigations

*Read before the N. J. Hom. Med. Soc., May 7-9, 1912.

with mild, warm antiseptic solutions for removing the discharge, and promoting its outflow, and other proper internal and local medication, these cases usually have a favorable termination. The mastoid symptoms subside, the purulent discharge diminishes and eventually ceases, the perforation in the tympanic membrane closes, and the membrane regains its usual healthy appearance, and the hearing distance becomes approximately, if not quite, normal. Altogether, this inflammatory process requires three or four weeks. As to its treatment one feature deserves to be specially emphasized, that is, the early incision of the inflamed drum membrane. This procedure, as a rule, gives the patient relief from pain, and places him in a far safer position by anticipating, in so far as is possible, mastoid and other complications.

After the acute suppurative otitis media has subsided, the causal factor should be sought for, and if found, an attempt should be made to eradicate it. If the cause be adenoids and enlarged tonsils, they should be removed. If obstructive nasal conditions be present, such as hypertrophied turbinals, septal spurs or deviations, they should receive proper surgical treatment. By correcting these underlying pathologic conditions, and putting the nose and throat in as nearly a normal condition as possible, subsequent ear involvement may be prevented.

Next will be considered those cases in which, through the virulence of the infection, the lesser resisting forces of the individual, or improper treatment, the mastoid symptoms, instead of subsiding, increase, suggesting that necrosis is occurring within the cells. These cases usually have a purulent or muco-purulent discharge from the ear, oftentimes the membrana tympani is bulging, and the posterior superior wall of the inner end of the external auditory canal is sagging. The mastoid is more or less tender to pressure, and infiltration of its periosteum and overlying tissues gives rise to a greater or lesser degree of swelling, and a thickened feeling on palpation. There may be redness of the integument, and a localized increase of temperature. The patient, as a rule, feels sick, usually has a degree or more of fever, and complains of pain, which is characteristically worse at night.

In dealing with such a case, in the absence of dangerous symptoms, for instance, those which would be suggestive of an intracranial complication, one may temporize for a few days, endeavoring to avoid an operation.

If the perforation in the membrana tympani seems inadequate for free drainage, it should be enlarged, or an additional opening made.

The usual treatment for acute suppurative otitis media already given should be carried out. In addition, the artificial or natural leeches may be used on the mastoid—the withdrawal of blood lessening the congestion. Hot compresses may be used, and antiphlogistic ointments may be applied to the mastoid, hoping to reduce the inflammation. If, despite these procedures, together with appropriate internal medication, the symptoms and inflammatory signs do not subside but increase, then the case is one for operation. It is unnecessary and wrong to wait for the formation of a subperiosteal abscess. The operation to perform is antrotomy. This consists in removing the external cortical layer of the mastoid, scraping out its cells, and opening the antrum. In addition, for the purpose of thoroughness, even in the absence of visible pathologic changes, some operators also remove the mastoid tip. Apparently, the only disadvantage of the latter procedure is that for a few days following the operation the patient suffers more discomfort on moving the head than if the tip with the attachment of the sterno-cleido-mastoid muscle had been left undisturbed. Such a case usually heals in from four to six weeks. The discharge from the ear, as a rule, ceases within two weeks, and by the time the wound has healed the hearing has often fully returned.

Sometimes a case is not seen until a subperiosteal abscess has formed. This may be the result of the formation of a fistula leading from within the mastoid through its cortex, or it may be due to the breaking down of subperiosteal inflammatory products, or from the pus having burrowed along beneath the soft portions of the posterior superior wall of the canal from the middle ear. The local findings of a mastoid subperiosteal abscess are so familiar that it seems unnecessary to mention them. The auricle protrudes further from the side of the head than on the healthy side, fluctuation is to be recognized, and the skin over the affected mastoid is often tense and discolored. There is tenderness to pressure and pain. Sometimes the pain is considerably less after the abscess has formed than it was before. This is to be explained if the pus has broken through the confines of the mastoid, thereby relieving the pressure within the nonyielding bony walls. The treatment should be the ordinary mastoid operation. The Wilde incision, which simply evacuated the abscess without removing its cause, has become practically obsolete. Many of the cases in which it was practiced resulted in suppurating fistulae being left behind, or in the subsequent exfoliation of sequestra or chronic foul smelling discharge from the ear, with the ever present danger of the development of a

complication. Probably some of the cases in which the so-called Wilde incision was sufficient were not mastoid abscesses dependent on middle ear suppuration, but were retro-auricular abscesses secondary to a furunculosis of the external auditory canal. As to the differentiation of mastoid subperiosteal abscesses from other conditions simulating them, it cannot be undertaken in a paper of this length.

Sometimes instead of the pus within the mastoid breaking through its external cortical layer it finds egress through the tip, or inner surface of the mastoid, and then burrows down into the neck or toward the vertebral column beneath the muscles. This condition furnishes the so-called Bezold mastoiditis—the fourth variety to be considered. Its systematic symptoms are similar to the varieties of mastoiditis already mentioned. Locally, there is found well marked infiltration about the tip, and tenderness. In palpating the tip, it is difficult or impossible to outline it, and one may get fluctuation in the region below or behind it. The patient always carries his head so as to relax the inflamed sternocleido mastoid muscle of the affected side, that is, he turns his face to the affected side, and inclines his head toward the well side. In operating such a case, in addition to removing the external cortical mastoid layer and cells, the tip and inner layer must be removed, the abscess cavity in the neck curetted and packed and sometimes a counter incision made for the sake of better drainage. Sometimes the introduction of a gauze drain through the original mastoid opening is sufficient for drainage, and the counter incision may be omitted. This naturally depends somewhat on the extent of the abscess. These cases of Bezold mastoiditis, if carefully operated, heal as quickly and kindly as the cases of simple mastoiditis not accompanied by external abscess formation.

Another variety of mastoiditis is that complicated by extradural abscess. This is generally due to the pus from the mastoid and middle ear burrowing through the bone to the extradural space, or may be brought about by the bacteria traveling through the lymphatics, or along the walls of the blood vessels, or through the bony fissure to the dura. This condition may arise during either acute or chronic ear suppuration. The abscess may be either in the middle fossa over the tympanum or antrum, or in the posterior fossa around the lateral sinus. The presence of an extradural abscess is to be suspected if the patient complains of localized head pains above the ear or behind the mastoid, with tenderness in either of these regions to percussion or pressure. More characteristic is the history of a sudden increase in the quan-

tity of ear discharge with amelioration of all other symptoms, or an aggravation of symptoms when the discharge diminishes or temporarily ceases. The treatment of such cases is the usual mastoid operation plus the removal of the inner compact layer of bone over the middle fossa or sinus, and the curetting of the granulations upon the dura, and draining with iodoform gauze. These cases, if thoroughly operated, make good recoveries.

Occasionally, the suppurative process in the mastoid extends to the lateral sinus, producing a suppurative phlebitis. If this condition is unrecognized, or diagnosed too late, or improperly treated, the issue of the case will almost certainly be a fatal one, the patient succumbing to a pyemia or meningitis. Symptoms which should lead one to be suspicious of sinus thrombosis are: edema behind the mastoid—the edema being due to the thrombus in the sinus obstructing the return circulation in the mastoid emissary vein; tenderness over the sinus; interference with the movement of the head, especially to the diseased side; and, if the case is advanced, a cord-like feeling running down the neck, following the course of the internal jugular—this is a late symptom. Most characteristic is the pyemic temperature and chills. The patient may give the history of a temporary cessation of the discharge, then a chill and a sharp rise in temperature. The temperature may, for example, be 99 degrees, and take a sudden jump to 104 to 105 degrees, and then suddenly fall below normal. With the drop of temperature, the discharge reappears, or increases if it has been diminished. My own experience with sinus thrombosis has been slight. While in Vienna I had the opportunity of seeing and assisting at six cases of sinus thrombosis. These cases, as a rule, were diagnosed before operation. Their method of procedure was to first cut down and dissect loose the internal jugular vein, and then ligate it, and also the facial and thyroid veins where they emptied into the jugular vein. They then did the mastoid operation, either a simple or radical, depending on whether the case was acute or chronic. Then they uncovered the sinus, incised it, and removed the clot, until the blood flowed, and packed it with iodoform gauze. Cases treated in this way, when recognized early, gave a good result. If a case has metastatic abscesses before operation, the chances of recovery are less, and those having a suppurative meningitis are almost invariably fatal. It may be added that a pronounced leucocytosis would assist in making the diagnosis, especially if the more characteristic aforementioned symptoms were present.

Primary mastoiditis must also be mentioned. By this is meant an inflammation developing in the mastoid process without apparent preceding middle ear involvement. That this condition is possible there is no doubt, yet it is extremely rare.

It may be conceived that infection by a thrombus from a suppurative focus in another part of the body may be carried to the mastoid by the blood stream, and there cause a suppurative mastoiditis.

It is also possible for pathogenic micro-organisms to pass up the Eustachian tube, through the tympanum, and then into the mastoid. In so doing, they may cause only very mild or possibly no middle ear symptoms, so that the involvement of the middle ear escapes our notice. These bacteria may lie dormant in the mastoid for a variable length of time, and then suddenly become active, and produce mastoiditis. Such cases are perplexing, since we always expect, in inflammation of the mastoid, to find coexisting signs of middle ear involvement.

The symptoms of this so-called primary type of mastoiditis are those of an ordinary mastoiditis minus the middle ear symptoms.

The treatment should be about the same as has been already mentioned under mastoiditis secondary to middle ear suppuration.

Neuralgia of the mastoid must sometimes be differentiated from an inflammatory mastoiditis. In neuralgic affection of the mastoid, there will be pain in the mastoid, and may be tenderness on pressure. As a rule, the middle ear will be normal, as shown by the hearing and tuning fork tests, and the absence of inflammatory symptoms. The sagging of the posterior superior wall of the inner end of the external auditory canal, which is characteristic of suppurative mastoiditis, is absent in neuralgia of the mastoid. As a reflex cause of pain in this region the teeth should always be suspected and examined. Toxic conditions, such as would arise from a pathological state of the kidneys, or disturbed gastrointestinal functions, should be sought for, and the possible hysteric origin of the pain should be borne in mind.

Chronic suppurative otitis media sometimes gives rise to mastoiditis. An interference with the outflow of the discharge by the formation of polyps in the canal or middle ear, or by the development of acute inflammatory swellings of the canal, as from furunculosis or acute diffuse inflammation may dam back the discharge, and give rise to mastoid inflammation. Many of the cases of chronic ear suppuration have a cholesteatoma as a complication, or as a cause of the continued suppuration. By the way of explanation, it may be mentioned that a cholesteatoma is the result of the epithelium of the canal and that

covering the external surface of the drum membrane growing through the perforation in the membrane into the middle ear and mastoid. The epithelium may continue to grow, and form a large whitish, caseous mass, arranged in concentric layers like an onion. The cholesteatoma consists of epidermis, pus, fatty detritus, bacteria and cholesterol crystals. Sometimes this mass, which has been almost dormant, becomes suddenly active for some reason, maybe unknown, and swells up and gives rise to all the symptoms of mastoiditis.

From pressure on the facial nerve a peripheral facial palsy may result. Through toxic absorption or pressure, the internal ear may become involved, and deafness and dizziness result. These may be symptoms of a beginning labyrinthitis, which may extend to the meninges and produce a fatal meningitis. Sometimes the cholesteatomatous mass by making pressure upwards on the roof of the attic or antrum leads to an absorption of the bone in this region. An extradural or brain abscess may then be the result. The proper treatment of mastoiditis with cholesteatoma is a thorough radical mastoid operation.

It has been the writer's intention to enumerate most of the affections of the mastoid, and to mention some of complications and symptoms of each condition. He realizes that some of the conditions, from the standpoint of those specializing on the ear, have been treated hurriedly, but for the general practitioners for whom the paper is written he hopes this brief resumé may be of assistance.

922 Pacific Avenue.

DISCUSSION.

GEORGE W. MACKENZIE: First, I want to congratulate Dr. Stickney on the excellency of his paper. He has succeeded in presenting this important subject in a very plain manner which I am sure has impressed every one of us with the importance of the early recognition of the complications that may arise from middle ear suppuration, especially in the neglected cases. I agree heartily with all that he has said and wish only to emphasize a few of the points that he has made.

It is true that the mucoperiosteum lining the mastoid cells is always more or less inflamed in the early stages of acute middle ear suppuration, which usually clears up promptly after spontaneous rupture of the tympanic membrane occurs. This should argue, first, for prompt and free paracentesis of the tympanic membrane; secondly, against the too prompt mastoid interference in every case where the patient presents some tenderness over the mastoid during the first few days of acute middle ear suppuration, before free drainage has been accomplished through a paracentesis or spontaneous rupture of the membrane.

Acute empyema of the mastoid cells, requiring operation, generally comes on some weeks after the acute middle ear suppuration has sub-

sided, when the patient develops a sudden recurrence of acute symptoms—pain, tenderness and rise of temperature. Furthermore, in these cases we need not wait until there is great swelling and threatened intracranial complications. When, however, the indications to operate present themselves, do not wait long, but operate promptly and thoroughly.

There is an exception to the rule “not to operate too early in an acute middle ear suppuration.” The doctor has covered this point in his paper; however, it will bear repetition.

When in acute middle ear suppuration the tympanic membrane does not rupture spontaneously within a reasonable period of time, say three or four days, it may be that the membrane is too thick and unyielding to rupture because of the presence of organized catarrhal exudate on its inner surface. If combined with this condition we have a very severe streptococcic infection, the infection may spread so rapidly as to involve adjacent structures, while the membrane remains intact. It happens, occasionally, in a patient with a severe streptococcic infection of the tonsils and adenoids that the infection spreads through the tube to the tympanic cavity, to the mastoid and to the meninges within a few days or a week, without the membrane having ruptured. An early examination of the tympanic membrane will show it to be rough, dull grayish or grayish pink color, the dullness with loss of light reflex being the most pronounced and ever constant finding.

The two especial factors in the causation of acute middle ear suppuration are first, adenoid vegetations; second, pyogenic micro-organisms. The pyogenic micro-organisms can not always be avoided but adenoid vegetations can. In most cases of acute middle ear suppuration we obtain the history of repeated mild attacks of earache lasting for a few days and then clearing up. These are attacks of acute serous or catarrhal inflammation of the Eustachian tube or middle ear, and speak for the presence of adenoids. All such patients should have their adenoid vegetations removed with the object of preventing acute middle ear suppuration at some future time.

I wish to endorse what the essayist has said concerning the Wilde's incision. Aside from giving relief to pus for the subperiosteal abscess, I have never seen it accomplish any lasting good, for a second more radical operation is always necessary. Two of the worst cases of necrosis of the temporal bone that I have ever met with were in cases where the Wilde's incision had been made and the physician and family were misled into believing that the case was doing satisfactorily, when, in fact, the conditions were growing worse.

It is a safe rule in surgery that when given a case of pus infection not to allow oneself to be satisfied with mere opening of the abscess, but attempt, as far as possible, to remove all unhealthy tissue and get down to the healthy, for by so doing the immediate danger is lessened and the period of recovery is shortened. This rule applies especially to aural surgery where so many vital structures appear in such close proximity to the ear.

SOCIETIES.

THE AMERICAN HOMŒOPATHIC OPHTHALMOLOGICAL, OTOLOGICAL AND
LARYNGOLOGICAL SOCIETY.

PROGRAM AND ABSTRACTS OF 1912 SESSION.

Hotel Fort Pitt, Pittsburgh.

MONDAY, JUNE 17, 1912.

First Session—2:30 to 6:00 P. M.—Business including President's
Address.

PAPERS.

1. Right Angle Enlargement of the Lacrimal Puncture.

G. DEWAYNE HALLETT, New York.

Since any failure of the lacrimal puncta to perform their proper function either by reason of atresia or eversion endangers the integrity of the eye, and since the early stage of an ectropion, other than those following cicatricial contraction, is present when the inferior lacrimal punctum fails to carry off the ordinary secretions of the conjunctival space, it naturally follows that early discovery will permit of correction with the least surgery.

Having this in mind and observing such conditions frequently present in patients otherwise fit for cataract extraction, and finding that dilatation of the punctum did not suffice, I began several years ago to make a right angle operation as follows:

With tenotomy scissors enter one blade into the dilated punctum at right angles to the free margin of the lid; the other on the conjunctival side and crowding them to the bottom of the canaliculus cut through.

Then enter one blade in the canaliculus at its bottom and well on the conjunctival side of the lid, with the other on the conjunctival side, with both blades pointing toward the inner canthus make a further cut of two or three mm. This wound remains open if probed daily for three days and is fully effective provided there be no faults of the nasal duct.

2. Arteritis.

E. B. WOODWARD, M. D., Lincoln, Neb.

3. Homœopathic Application of Tuberculin in Phlyctenular Keratitis.

R. I. LLOYD, M. D., Brooklyn, N. Y.

4. Rhinolith.

O. G. JENKINS, M. D., Lansing, Mich.

5. Adenoids or Troubles in the Nasopharynx.

W. E. REILY, M. D., Fulton, Mo.

The tissue forming the pharyngeal tonsil and lining the nasopharynx is composed of lymphoid tissue and muciparous glands.

The diagnosis of a hypertrophy of this tissue which interferes with the normal function of the nose or ear is comparatively easy.

The question naturally arises as to what constitutes an abnormal condition and is there no other treatment for the milder cases except surgery?

Does the result of surgical treatment of this condition satisfy the demand? If so, why is there such a large percentage of recurrence?

Is it not time that we made a more definite differentiation and applied "The Indicated Remedy," Surgery, when indicated, and other treatment when it will serve better?

Is there not a constitutional condition behind practically every case of this trouble? Has the tubercular heredity been, as some would indicate, completely eliminated as a causative factor in this condition?

6 Conservation as Applied to Nasal Respiration.

FRED. C. SAGE, M. D., Waterloo, Ia.

Physiology of nose.

Mouth breathing always inimical to health.

Striking effect of artificial closure of nostrils in animals and in human operative cases. As the chain is no stronger than the weakest link, so the air current is no larger than the narrowest part of nasal canal.

Catarrh usually means some nasal obstruction. People are just beginning to realize that deafness, defectives and dyspnoea are about as common as dirt, debt and the devil.

The family doctor is ultra-conservative in treating mouth breathers with pills and procrastination, while some specialists are far too radical, roughly removing too much normal turbinates, etc.

Finally deformities of face are produced which hamper the possibilities of their possessor for life, and remember the orthodontist or dental specialist can often do much to widen the palatal arch, correcting mal-occlusion and restoring the function of mastication, besides often greatly increasing the breathing space.

7. Tonsillotomy Versus Tonsillectomy.

CHAS. E. TEETS, M. D., New York.

8. Headaches Met by Nasal Specialists.

GEORGE A. DENMAN, M. D., Toledo, Ohio.

TUESDAY, JUNE 18, 1912.

Second Session—2:30 to 6:00 P. M.—Symposium, Aural Suppuration.

I. O. DENMAN, M. D., *Chairman*, Toledo, O.

9. Pathology of Aural Suppuration.

H. P. BELLOW, M. D., Boston, Mass.

The bacterial invasion of the ear, the routes of invasion, the varieties of pyogenic bacteria, the tissue changes incident to and remaining after the pyogenic process in various successively deeper portions of the ear.

10. General Therapy of Aural Suppuration.

JAMES A. CAMPBELL, M. D., St. Louis, Mo.

Treatment of aural suppuration depends entirely upon whether acute or chronic, as well as the cause and general complications.

When caused by, and accompanies acute catarrhal diseases of the nose and throat, or eruptive diseases involving same, these conditions must be considered and treated as a prime source. In such cases, when purulent secretion collects in middle ear, there is either a spontaneous rupture and discharge or such drainage must be secured by the usual puncture. This with absolute cleanliness, sometimes aspiration, and in suitable cases gentle inflation, will remedy the trouble in comparatively short time.

In chronic cases perforation is established. That so many forms of treatment have been offered, best proof no one form will cover all cases.

First essential is drainage and absolute cleanliness—obtained in various ways, with syringe, which I do not favor; peroxide of hydrogen (although condemned by certain authorities) is very useful, never saw any bad results. Do not believe it can drive secretions back into mastoid cells. Gaseous actively always takes direction of least resistance outward.

If perforation is small, local treatment cannot reach tympanic cavity; hence of little use, except for cleanliness. If opening large many things offered—I use most frequently alcohol and boroglyceride in varying proportions; formalin solution, 1 to 500; argent. nitr. and permanganate of potash solutions, etc.

Insufflation of boric acid and calendula or borax powder more used in past than at present.

Polypoid or granular elevations should be removed.

Ossiculectomy formerly popular, not as much so now.

Radical mastoid operation strongly urged by some, in obstinate cases, has its uses, but should be used only as last resort. Mastoid involved to some extent in every case purulent otitis. Radiant heat,

Beck's electric heater useful. Dr. E. D. Brooks, remarkable results from X-Ray flash treatment, worthy of trial. Have used high frequency electricity in a few cases. Vaccines latest offering. Have had little personal experience. Dr. Reik's exhaustive review, shows conflict of opinion on subject. But Dr. Nagel's remarkable experience, where 39 cases out of 40 were cured by use of autogenous vaccines, certainly must command our most careful attention and emulation; no other treatment yet offered can compare with it in efficiency. Reports Dr. L. McDonald, and Dr. J. A. Colmer, on topic: Preparation of vaccines a laboratory process requiring time and experience.

Internal remedies without doubt serviceable—records of the past clearly demonstrate this.

11. The Surgery of the Middle Ear.

BURTON HASELTINE, M. D., Chicago, Ill.

In middle ear infection surgery, of course, begins with paracentesis. Early incision is advocated even in serous effusions as frequently by careful measures suppuration may be forestalled.

Middle ear infections properly treated rarely develop mastoid complications requiring surgical measures.

Brief discussion of indication for operation in acute mastoiditis with description of means by which deformity is avoided and hearing conserved.

Consideration of operative procedures for chronic infection with indications for and results of each. The writer dissents somewhat from orthodox opinions as to the sphere of these various operations and will present his reasons in detail.

Technique considered with reference to some special features and post-operative care described. The Yankauer and other methods of treating eustachian pyo-salpinx and their relation to tympano-mastoid surgery.

12. Labyrinthine Suppuration.

GEO. W. MACKENZIE, M. D., Philadelphia, Pa.

13. Intracranial Complications of Aural Suppuration.

C. C. COLLIER, M. D., Chicago, Ill.

TUESDAY, JUNE 18, 1912.

Third Session—6:00 to 10:00 P. M.—Symposium, Glaucoma.

A. E. CROSS, M. D., *Chairman*, Worcester, Mass.

14. Pathology of Glaucoma With Demonstrations.

FRANK O. NAGLE, M. D., Philadelphia, Pa.

Historical review of the conception of glaucoma. Forms of glaucoma. Mechanism for the maintenance of intra-ocular tension. His-

tological study of parts of the eye having prominence in glaucoma. Cause of increased tension. Symptoms of glaucoma explained from a pathological standpoint. Demonstrations. Normal anterior chamber. Hyperopic anterior chamber. Myopic. Edema of cornea. Peripheral synechia of iris. Ectropion iris. Glaucomatous excavations. Glaucomatous cataract.

15. Glaucoma, Cause and Cure, Demonstrated in the Laboratory.

THOS. M. STEWART, M. D.

Cause.—Water absorption by cellular structures of the eye due to modified nutritive changes of an acid character. Plant physiology the basis of the pathological investigation into animal structures.

Cure.—Change of state to the system by diet; and tension of eye reduced by citrate of soda injections.

16. The Relation of Sinus Disease to Glaucoma.

J. IVIMEY DOWLING, M. D., Albany, N. Y.

17. Some Observations in Glaucoma With the Schiotz's Tonometer.

ELMER JEFFERSON BISSELL, M. D., Rochester, N. Y.

The tonometer is not a complicated instrument. Its application, while requiring some skill, is not difficult; it consumes but little time and causes no corneal irritation. To secure the most accurate measurement with it an assistant is necessary and the patient must be able to hold his eyes in a fixed position. The instrument far surpasses palpation when there is only a slight increase in tension, and it is invaluable in recording from day to day the exact effect of remedial measures. In a series of cases showing increased tension the author has kept a record of the horizontal diameter of the cornea, the radius of the corneal curvature, the size of the pupil, the blood pressure and the condition of the scleral vessels as observed with the Zeiss binocular corneal microscope. Some observations have been recorded as to the comparative value in reducing tension of eserine, sub-conjunctival injections of sodium iodate and sodium citrate. Occasionally any sub-conjunctival injection will cause a rapid increase of tension. It has been observed quite uniformly that cases with a moderate increase of tension would have a lower tension on bright days and after using the eyes at near work.

18. Blood Pressure as a Factor in Glaucoma.

A. E. IBERSHOFF, M. D., Cleveland, O.

19. The Management of Acute Hemorrhagic Glaucoma in Cases of Arteriosclerosis.

F. G. RITCHIE, M. D., New York.

A comprehensive knowledge of the pathological changes, both local and general, is necessary for the intelligent treatment of these cases.

The treatment is to be directed to the general cardiovascular disease

as well as to its ocular manifestations. The latter treatment comprises the use of the galvanic current, the high frequency current, myotics and surgical intervention. The former includes general hygienic measures; careful restriction of the amount of both solids and fluids ingested; the curtailing of the protein element of the food to the smallest amount consistent with the needs of the individual; the proper elimination through the emunctories, to be maintained; the application of general high frequency modalities, such as potential alternation and autocondensation; phototherapy and constitutional drug treatment.

20. The Operative Treatment of Glaucoma With Special Reference to the Value of the Substitutes for Iridectomy.

I. O. DENMAN, M. D., Toledo, O.

WEDNESDAY, JUNE 19, 1912.

Fourth Session—10:30 to 12:00 A. M.

Business Session—Comprising Reports of Officers, Committees; Committee of Educational Requirements and Post-Graduates Schools, BURTON HASELTINE, M. D., *Chairman*, and Election of Officers.

WEDNESDAY, JUNE 19, 1912.

2:00 to 6:00 P. M.—Entertainment with Institute.

WEDNESDAY, JUNE 19, 1912.

Fifth Session—8:00 to 10:00 P. M.—Informal Smoker.

THURSDAY, JUNE 20, 1912.

Sixth Session—10:30 to 12:00 A. M.—Bureau Reported Cases.

W. B. PHILLIPS, M. D., *Chairman*, Cleveland, O.

21. Cataracts.

DEAN M. MYERS, M. D., Ann Arbor, Mich.

Report of fifty consecutive cases. Number of extractions in capsule. Number of extractions without iridectomy. Reasons for iridectomy. Reasons for capsulotomy. Condition of vitreous and its bearing upon results. Irido puncture and its effect upon secondary prolapse of iris. Visual results.

22. Extirpation of Lacrimal Sac.

DAVID W. WELLS, Boston, Mass.

This operation is advised in all cases of blenorrhœa and stenosis of the duct, first, as the best possible prophylaxis of ulceration of the

cornea and acute dacryocystitis; secondly, as a substitute for long continued probings or the introduction of solid styles.

The Meller method as modified by Bergmeister is advised, but a brief review of the present practice of other surgeons is given.

Eleven cases are presented, all of which have been followed so that end results are given, with photos of patients on fourth day after operation together with photomicrographs of the sac by Dr. Watters.

A new curette for the duct is illustrated.

The author's management of the different classes of lacrimal obstruction is outlined, and a plea is made for the conservative treatment of the milder cases of stenosis.

23. Vaccines in Nose, Throat and Ear Work.

W. H. WATTERS, M. D., Boston, Mass.

Will consist of a summary of experience with the use of vaccines in these conditions, together with a citation of some individual cases. The paper will be based upon personal experience rather than theoretical considerations.

24. Some Cases of Ethmoid Disease.

I. TOWNSEND, M. D., New York.

CATARACTS.

25. Extraction in Complicated Cases.

WM. W. SPEAKMAN, M. D., *Chairman*, Philadelphia, Pa.

26. The Use of Dionin in Senile Cataract.

WM. M. MUNCY, M. D.

THURSDAY, JUNE 20, 1912.

Seventh Session—2:30 to 6:00 P. M.—Symposium, Prophylaxis.

HERBERT D. SCIENCK, M. D., *Chairman*, Brooklyn, N. Y.

27. Public Measures Tending to Prevent Eye, Ear, Nose and Throat Diseases.

ROYAL S. COPELAND, M. D., New York.

Will deal with the dangers of the common carriers and their duty to the public in providing safety devices for the protection of lives and eyes of the traveling public.

28. Professional Measures Tending to Prevent Eye Diseases.

C. GURNEE FELLOWS, M. D.

I. The medical profession is responsible for the education of the public and the promotion of organized effort to have additional laws

adopted in reference to the avoidance and prevention of ophthalmia neonatorum, which laws already exist, but need wider and more general application.

II. The general diffusion of knowledge as to the dangers of gonorrhœa and syphilis in infecting eyes. To this end the question comes up, which is already up in other channels of medicine, as to the advisability of reporting venereal diseases by law.

III. The examination of eyes as a prophylactic among:

- a. School children.
- b. Railroad employes, motor drivers, etc. These should be cautioned as to the wearing of goggles to prevent wounds and foreign bodies.
- c. Factory employes and gangs of men employed for any purpose. These examinations should include tests of vision, color tests, etc.

IV. Watchful care as to tuberculosis of the eyes, as well as of the general system.

29. Professional Methods of Preventing Eye, Ear, Nose and Throat Diseases.

GEORGE A. DENMAN, Toledo, Ohio.

1. Avoidance of the pernicious pacifier, allowing infant to employ the muscles used in act of nursing only at regular intervals.
2. Attention to tonsils and adenoids sufficiently early to prevent the anatomical abnormalities resulting from mouth-breathing.
3. Scientific sanitation and care of the ear and nose during and following the exanthemata.
4. Recognition of nasal abnormalities requiring surgical interference, sufficiently early, that conservation of the tissues may be observed.
5. Prompt removal or correction of all mechanical obstructions to the drainage and ventilation of the sinuses.
6. Brief review of anatomical location of ostia in the "Vicious Circle," and importance of early and prompt procedures directed toward them rather than the sinuses themselves.

30. The Examination of School Children.

WILLIAM M. MUNCY, M. D., Providence, R. I.

1. Its great usefulness as a preventive measure.
2. The authority in whose name this examination is made:
 - (a) By authority of the Boards of Health with its advantages.
 - (b) By authority of the Boards of Education with the arguments in its favor.
3. Methods of examination under State laws.
4. Methods under city supervision.

5. The author's knowledge of simple school inspection of those apparently defective.
6. The author's experience in the compulsory yearly examination of each pupil by the teachers under medical supervision.
7. The difficulties of the later method with suggestions.
8. Methods of procuring glasses and treatment for the defectives.

31. Abstract of a Paper on Prophylactic Surgery of the Eye.

J. HOLBROOK SHAW, Plymouth, Mass.

Prophylactic surgery a result of a high degree of civilization.

Strictly speaking, prophylaxis predicates healthy structures, so that in relation to the eye prophylactic surgery would be an anomaly, but there are some conditions in which the office of surgery may fairly be called prophylactic.

The accessory sinuses by their intimate relation with the orbits may cause serious ocular disturbance. For the safety of the eye it is necessary that these sinuses should be maintained in a normal state. The teeth should be free from caries.

Orthophoria may be secured by surgery where there is a muscular imbalance, thus averting serious consequence to the nervous system and loss of binocular vision with its accompanying limitations.

Theories as to the method by which near sight is produced are several, but all agree that over-use of the eyes for near work in childhood and youth is responsible for it.

Scientists of repute have felt that myopia was not a disease, but a sort of natural adaptation evolved in the process of civilization and a positive advantage. There is, however, a malignant or pernicious form.

Authorities differ as to the efficacy of phakolysis in near sight. Most surgeons never do the operation; others find it useful, operating when good results are obtained with glasses, for the convenience of their patients in going without them.

Ophthalmic surgeons should use their influence to have school rooms properly lighted, the ideal being overhead lighting. School seats and desks should be adjustable and adjusted, and there should be less written and more oral work in the lower grades with ample out-door recesses.

There is another ocular condition where the value of surgery in preventing disastrous consequences to the vision is universally recognized and the earlier the surgical interference occurs the greater the prospect of success.

Ophthalmic surgeons need no warning to be alert for the predisposition to glaucoma, but the profession as a whole need to have the conditions which predispose to it constantly in mind in order that surgical interference when it is sought may be prophylactic and not profitless.

32. Prophylactic Surgery of the Ear, Nose and Throat.

T. MORRIS STRONG, M. D.

33. Cleanliness in Surgery.

GEORGE B. RICE, M. D.

Conditions in surgical practice precious to the antiseptic period.
 Mortality in the hospitals.
 The discoveries of Pasteur and Lord Lister.
 Antiseptic surgery.
 Lister's methods.
 Description of pus-producing micro-organisms.
 The aseptic era.
 Surgical cleanliness; how obtained.
 Methods in use at the Massachusetts Homœopathic Hospital.
 The necessity for care in carrying out the principles of asepsis in all forms of surgical work.
 The responsibilities of the surgeon.

34. Homœopathic Remedies Tending to Prevent Eye Diseases.

DANIEL A. McLACHLAN, M. D.

35. Homœopathic Remedies Tending to Prevent Ear, Nose and Throat Diseases.

HARRY S. WEAVER, M. D.

THURSDAY, JUNE 20, 1912.

Eighth Session—8:00 to 10:00 P. M.—Symposium, Prophylaxis.
 Concluded.

FRIDAY, JUNE 21, 1912.

Ninth Session—Clinic at Homœopathic Medical and Surgical Hospital.

H. BALLOU BRYSON, M. D., *Chairman of Committee.*

HOMŒOPATHIC MATERIA MEDICA AND THERAPEUTICS.

DEPARTMENT EDITOR, PHILIP RICE, M. D.

SOME RELIABLE OLD STAND-BYS.

GEORGE H. QUAY, M. D., CLEVELAND, O.

IN this day when the tendency is to resort to the use of *Ferrum metallicum crude*, with a cutting edge, upon the least pretext, or to prescribe the bane of scientific therapeutics, "Made in Germany," printed on the wrapper, it may be well for us to pause in our desire for something new, and consider a few of our well proven and reliable old stand-bys.

After an experience of twenty years devoted to work on the ear and throat I am more strongly than ever convinced that many of our remedies are not fully understood, or not appreciated. It is so easy to resort to the knife, or to local applications.

Lac caninum. A remedy that will give wonderful relief in acute tonsillitis where the soreness or pain, or whatever the sensation of which the patient complains, begins on one side, goes to the opposite side with some relief of the first tonsil, then shifts back to the tonsil first attacked. When the above symptom is present, immaterial as to other symptoms, *Lac caninum* c.c. will bring speedy relief.

Ignatia is a remedy that we associate with over-excitability, we think of it in patients who are impressionable. "The patient is full of grief," sadness, sighing, in fact, apt to be hysterical, but we give it a less harsh sounding name, we say the patient is nervous.

In acute follicular tonsillitis, when the openings of the tonsil crypts are plugged with exudate giving the tonsil the appearance of the lid of a pepper-box, *Ignatia* 6x or higher will not disappoint.

Sambucus. In catarrhal and bronchial affections of children I believe *Belladonna* is often prescribed where *Sambucus* is indicated. The infant has a loose choking cough, but the main symptom I wish to bring out is that as soon as the child begins to nurse it has to let go of the nipple, the nose is blocked up, consequently it cannot breathe and nurse at the same time. I use the remedy in the lower potencies.

Ambra grisea. In asthma I have more than once used this remedy with excellent result where there was present a nervous cough, or

asthmatic breathing accompanied by eructation of gas, the gas seems to catch in the throat thereby aggravating the asthma. I use the 3x or the 6x.

Mephitis. In whooping cough, unless some other remedy is strongly (and I emphasize strongly) indicated, I prescribe *Mephitis* 3x in solution every two hours. It has rarely disappointed me; it is as near a specific as any remedy I have ever used.

NATRUM ARSENICOSUM AS AN EYE REMEDY.

RUDOLPH F. RABE, M. D., NEW YORK CITY.

Sodium arsenate is useful in the treatment of simple catarrhal conjunctivitis and blepharitis marginalis. The general practitioner is frequently called upon to prescribe for these conditions, and may do so with entire propriety. Of course, other ocular defects, which require the specialist's knowledge, must be attended to or ruled out. The *Natrum ars.* case presents some strongly marked characteristics which call attention to its choice and make this certain. Among these is the sensation of weakness of the eyes, with stiffness of the balls and a pronounced tendency for the lids to close. The lids feel heavy and droop, much as we find in *Causticum*, *Gelsemium* and *Sepia*.

In the former two, however, the symptom is due to the semiparalysis produced by these remedies, a paralytic weakness which is shown all through the pathogeneses of these drugs. In *Sepia* the type and constitution of the patient will differentiate. Relaxation of muscles and ligaments, ptosis of organs, is common to the cuttle fish juice. *Sepia* is worse mornings and evenings, and wants the exhilarating effect of cool air. *Natrum ars.*, on the other hand, resembles *Natrum mur.* in its morning and forenoon aggravation, and from its arsenic element receives its sensitiveness to cold air. *Natrum ars.* is decidedly aggravated by wind, bright light and by smoke. Sensations of burning and smarting are common. Lacrimation in the wind is marked, resembling *Euphrasia* in this respect. Further symptoms are agglutination of the lids in the morning and a general aggravation of the entire condition from reading or writing. Several clinical experiences attest to its value. It is best suited to chronic cases. Nasal catarrh is a prominent feature of the remedy also, and its sphere of action here is quite decided. The remedy deserves more careful study and is undoubtedly frequently overlooked.

MATERIA MEDICA NOTES.

Capsicum. Three things characterize a capsicum case, namely, general uncleanness of body; burning pains, as from cayenne pepper; a marked tendency to suppuration in every inflammatory process. Of the three things the first is the most conspicuous; it cannot possibly be overlooked.

Kali sulf. Not infrequently weeks and even months after an operation for the removal of adenoids the original symptoms reappear, that is, the mouth breathing, snoring, etc., and not infrequently a second operation is performed. Assuming that the first operation was properly done, the second is absolutely uncalled for. These symptoms are the result of engorgement of the nasopharyngeal mucous membrane, and this will be cured in a few days with *Kali sulf*.

Æsculus. A throat which has a membrane that is either abnormally pale or red, dry, glazed and thin in appearance as if stretched across the posterior wall of the pharynx, and has the sensations of burning, constriction, dryness, pricking as from sticks, roughness, and with hawking up of ropy mucus of sweetish taste, calls for *Æsculus*. In the early stages of atrophic pharyngitis in dried up bilious subjects this remedy has proved exceedingly helpful.

Phytolacca. This remedy has many symptoms quite like those of *Æsculus*. Though both remedies may be needed in acute and chronic conditions, *Phytolacca* is more often called for in acute and *Æsculus* in chronic troubles. The burning of the former is much more violent, and so the choking sensation, and the symptoms will either get well in a few days or else pass on into a very severe tonsillitis, whereas the *Æsculus* sore throat will linger on for weeks and even months.

BOOK REVIEWS.

TEXTBOOK OF OPHTHALMOLOGY; in the Form of Clinical Lectures. By DR. PAUL ROEMER, Professor of Ophthalmology at Greifswald. Translated by DR. MATTHIAS LANKTON FOSTER, Member of the American Ophthalmological Society; Member of the American Academy of Ophthalmology and Oto-Laryngology. With One Hundred and Eighty-six Illustrations in the Text and Thirteen Colored Plates. Pages, 275. Volume I. New York. Rebman Company, 1123 Broadway. Price, Cloth, \$2.50.

The plan on which this book is written, a collection of clinical lectures, is rather unique, but on perusal these demonstrate many advantages, among such we mention—that it presents the subject in the practical form that the student will subsequently meet in the daily performance of professional duties,—that even at the risk of criticism for being pedagogical, it repeats many important minute items, thereby the better stamping them upon the reader's mind—that, we might say, it assists or shows the beginner or practitioner with only moderate clinical advantages, how to adapt his theoretical knowledge to his practical work, a process apparently second nature to some minds, but very difficult to many others; and that it presents the subject in a very readable, attractive form, to those having studied in foreign clinics, reminding them of such instructive and pleasant experiences. For the later the translator is to be thanked, as we English students all know how close and involved the customary German phraseology presents itself to us.

In the consideration of syphilitic diseases considerable prominence is given to the Wasserman Reaction. But in such an otherwise up-to-date treatise we wonder a little that the author or translator has held to the popular, but older nomenclature,—*spirochaeta pallida* instead of the more exact or less confusing *trypomonas pallida*. Again, the treatment of syphilitic iritis seems very meager,—only injunctions being recommended,—no mention of Salvarsan being made.

The colored plates, thirteen in number, deserve the most complimentary mention,—the tints being very true to nature—not an easy task to be accomplished in chromo-lithographs of the delicate differential tints assumed by pathological processes in the eye. For this later, as well as the general typography, the publishers are to be credited; but the calendared paper does not fulfil the author's idea that an ophthalmological treatise should set an example in not being "printed on any paper with a glaze," etc.

OTHER BOOKS RECEIVED.

THE TREATMENT OF SHORTSIGHT. By PROF. DR. J. HIRSCHBERG.
Translated by G. LINDSAY JOHNSON, M. D., F. R. C. S. Published
by Rebman Co.

SURGERY OF DEFORMITIES OF THE FACE. By JOHN B. ROBERTS, A. M.,
M. D. Published by Wm. Wood & Co.

BABY'S TEETH TO THE TWELFTH YEAR. By ALBERT WESTLAKE, D. D.
S. Published by Mitchell Kennerley.

TRANSACTIONS OF THE EIGHTH QUINQUENNIAL HOMOEOPATHIC IN-
TERNATIONAL CONGRESS. In two Volumes. London, England, July
17-22, 1911.

PHYSIOLOGY OF THE SEMICIRCULAR CANALS and Their Relation to
Seasickness. By JOSEPH BYRNE, A. M., M. D., LL. B. Published by
J. F. Dougherty.

FOOD FOR THE INVALID AND CONVALESCENT.. By WINIFRED S. GIBBS.
Published by The Macmillan Co.

ANGLO-SAXON LEECHCRAFT, An Historical Sketch of Early English
Medicine. Published by Burroughs, Wellcome & Co.

THE TRAGEDY OF CORIOLANUS (Shakespeare). Edited by STEWART P.
SHERMAN, PH. D. Published by The Macmillan Co.

The Journal of Ophthalmology, Otology and Laryngology

Vol. XVIII

Lancaster, Pa., and New York, July, 1912

No. 7

EDITORIAL.

THE 1912 O., O. AND L. SESSION.

JUDGING from the medical society meetings of all creeds and specialties, one-quarter of the membership is regarded an average attendance—in this respect this meeting was an average one, but far more than such in the interest and instructiveness of its papers and discussions, although about one-third of the authors disappointed us by their absence, necessitating the reading of their papers by title only.

On arriving at Pittsburgh we were agreeably surprised by obtaining a meeting room for our sessions in the Memorial Hall, where the American Institute of Homœopathy held its convention. High over the hall entrance, nestling among the artistic architecture of this massive and useful Soldier's and Sailor's Monument was an illumined "A. I. H., Welcome" in red and white bulbs—the first impression but not the last nor whole of the royal warm reception which the hospitable Pittsburgh Homœopathic Medical Society and Pennsylvania State Homœopathic Medical Association gave their guests.

While the Fort Pitt Hotel, situated in the heart of the business section of the city, could and would have comfortably accommodated our society, still holding our sessions in Memorial Hall, made it convenient for our members and those of the A. I. H. to visit each other's meetings. And naturally the surroundings of the hall, being in the park section of the city, gave a bright and holiday atmosphere to the whole affair. As probably many but not all may know that the view from the approach to the hall includes the palatial Hotel Schenley, the artistic Pittsburgh Athletic Club, the majestic Carnegie Institute, the "Million Dollar Base Ball Field," renowned among all the devotees of the national game, and beyond this the view extends

over the beautiful rolling grounds of Pittsburgh's famous parks, and still further over the suburban districts and fertile country in the distance.

Beside the regular program, at the society smoker, there was the usual confidential exchange of instructive professional experiences, which are scarcely reducible to the cut and dried written article and are better drawn from professional memory under the enticing influence of whiffing the beguiling weed.

The report of the Committee on Educational Requirements by its chairman, Dr. Haseltine, demonstrated such a thorough investigation of the needs of our specialists and study of the educational opportunities now offered in all classes of institutions that it does not lend itself to abbreviation.

The surgical clinic was the crowning practical treat of the session, occupying both morning and afternoon; it was held in the handsome, modernly equipped, and, we think, well known "The Pittsburgh New Homœopathic Hospital." Incidentally we desire to say that this hospital well deserves the eulogistic description it has received in some of our medical periodicals. The clinic consisted of 35 cases of great variety,—among which were Cataracts, Deflected Septa, Strabismus, Cleft Palate, Dacryocystitis, Tonsil and Adenoid Hypertrophies, etc.

For the coming year the society placed itself in the efficient care of the following officers:

President, George A. Shepard, New York, N. Y.

First Vice-President, Ira O. Denman, Toledo, Ohio.

Second Vice-President, Ella G. Hunt, Cincinnati, Ohio.

Secretary, Dean W. Myers, Ann Arbor, Mich.

Treasurer, Albert E. Cross, Worcester, Mass.

Censors, J. Ivimey Dowling, Albany, N. Y.; Gilbert J. Palen, Philadelphia, Pa.; Robert M. Jones, New York, N. Y.; J. B. S. King, Chicago, Ill.; Wm. M. Muncy, Providence, R. I.

Although the American Institute of Homœopathy voted to hold its 1913 convention in Denver, our president has expressed his opinion, unofficial, that it would be wiser for our society to select a city more centrally located, probably following the plan of our 1910 meeting,—holding the session before the American Institute of Homœopathy and, so to speak, on the road to Denver (from the east) so that our members may continue on their way to the American Institute of Homœopathy after the close of our convention.

Unlike the other three great conventions, medical and political, convening at this season—we needed no such condiments as wire-pulling, mud-slinging politics, etc., to give zest and zeal to a meeting so full of solid medical mental pabulum,—we give ourselves the honor place. And judging from comments of colleagues, we feel warranted in assuming the authority to again thank in a more public manner our Pittsburgh and Pennsylvania colleagues for their hearty welcome, royal entertainment and thoughtful care in making the meeting a veritable success.

THE DEPARTMENT OF CURRENT LITERATURE.

THE JOURNAL OF OPHTHALMOLOGY, OTOTOLOGY AND LARYNGOLOGY will, commencing with this issue, establish a Department of "Current Literature" of the Eye, Ear, Nose and Throat.

We will endeavor to publish a table of contents of the journals devoted to these special subjects, believing that, by this method, we can best keep our subscribers informed of the advances and discoveries in ophthalmology, otology and laryngology.

A plan has been adopted whereby the JOURNAL will publish under the name of each "special" journal of that issue a table of contents of all original articles, naming the author of the paper, and, as far as space will permit, an abstract of these articles.

This department will supplant that of "Abstracts" in our former issues, and will be under the capable editorship of Drs. Wm. McLean, N. Y. City, and Frank O. Nagle, Philadelphia.

REMOVAL.

Dr. John L. Moffat has removed to Ithaca, N. Y.—119 Stewart Avenue, corner of Seneca Street—where his practice will be limited to diseases of the eye, ear, nose and pharynx.

BUREAU OF REPORTED CASES.

W. H. PHILLIPS, M. D., CHAIRMAN,

Cleveland, O.

EXTIRPATION OF THE LACRIMAL SAC.

BY DAVID W. WELLS, M. D.,

Boston, Mass.

STENOSIS of the lacrimal duct is a very annoying condition, even if the symptoms are limited to epiphora. Since blephorrrhœa of the sac so frequently follows, it is universally regarded as dangerous to allow the canal to remain closed.

The accumulation of the secretions in the sac forms a glairy mucous, which is a most excellent culture medium, so that sooner or later pathogenic bacteria develop. Although it may be postponed for some years, an acute dacryocystitis almost always follows. The eye being bathed in pus, is a constant menace. Any trivial injury of the corneal epithelium is very liable to lead to ulceration. According to Fuchs it is the cause of "one-third of the cases of the much dreaded *ulcus serpens*." Roemer, *Text-Book Ophthalmology* (1912), Vol. 1, puts it as high as 60%. He says farther (p. 159): "The most important source of infection in *ulcus serpens* is dacryocystitis. In the majority of cases, the pneumococci which infect the small superficial wounds of the cornea come from the lacrimal sac, . . . Many cases of *ulcus serpens* could have been avoided by the timely extirpation of the diseased lacrimal sac. The most prophylactic measure which can be undertaken is the early performance of this operation, introduced as a means of prophylaxis by Axenfeld. It can be performed under local anæsthesia and is absolutely without danger. Advise all patients, especially if they belong to the laboring classes, to have a suppurating lacrimal sac extirpated. By doing so many an eye can be guarded against *ulcus serpens*."

No one thinks of undertaking an operation on the globe of the eye if the drainage be stopped without first either curing the stenosis or

NOTE.—Discussion of this, as also all other papers under this Bureau, will be published in the September issue.

walling off the sac by sealing the canaliculi. My only case of infection after cataract extraction had recovered from coryza only a few days before operation. This of course was not learned until afterward. As this case was the middle one of three operated the same morning, and as the other two were clean, it seemed justifiable to assume that it was an auto-infection.

While the radical operation of the extirpation of the lacrimal sac is justifiable as the most rapid and painless treatment of blenorrhœa, it is especially indicated as a measure of "Preventive Medicine," eliminating a most potent cause of many serious eye diseases.

My attention was first called to this operation in 1901, when Lancaster, of Boston, reported in the *Boston Medical and Surgical Journal* five cases from whom he had removed sac, or sac and gland. His results were so satisfactory that one could not fail to be convinced of the efficacy of the operation. His technique was not given, and I somehow failed to ascertain it from him. He showed that the fear that the eye would suffer from insufficient lubrication of the lids was unfounded. He summed up the indications for the procedure to be:

- 1st. Cases not cured by persistent probing.
- 2d. For patients who could not spare the time for long continued probing.
- 3d. For cataract cases in whom a stenosis of the duct contra-indicated extraction.

He referred to the Bibliography given by Holmes, Arch. Oph., Jan., '99, who reported fourteen cases of his own, in most of which both gland and sac were removed. Some very good illustrations of the bony and soft parts were given, but the statement that "it is not an easy operation" deterred me from undertaking it until I had seen it performed satisfactorily.

His indications were the same as Lancaster's. He used a general anæsthetic, and spoke of hæmorrhage as a very troublesome feature. He said that the canaliculi must be destroyed by cautery and that in a few cases he had injected a thick warm starch colored with iodine. About a year later, I saw one of America's most expert ophthalmic surgeons perform the operation with the injection of paraffine. The injection was not well done and the operation was as tedious and bloody as those I had previously observed. The sac was removed in pieces. The uncertainty of having removed every particle of mucous membrane led most operators to finish every operation by cauterizing. This of course necessitated an open wound and healing by granulation.

I therefore continued probes, electrolysis and solid styles, having more failures than successes. The barbarous Theobald probes were abandoned, as were also the medium-sized hollow styles, as it was found that tissue from the nose would grow into and occlude the tube. Dr. Wamsley, of Philadelphia, very kindly showed me how to use his large telescoping tubes. These I procured, but never attempted a case, and felt quite satisfied with my temerity when some years later Dr. Wamsley announced that he had discontinued their use. Solid styles were tried with some success, but I cannot share the enthusiasm of Beebe, of Milwaukee.

As a result of this experience my practice became very conservative and so continues. I have not used a canaliculus knife for seven or eight years.

Cases of bienorrhœa of the sac were washed out and patient taught to express the contents with the fingers. Acute dacryocystitis was incised, drained and allowed to granulate. In only a small portion was an attempt made to secure nasal drainage. Needless to say, this class of work was not undertaken with any great enthusiasm. In the summer of 1906, on arriving at Vienna, I met Fox, of Philadelphia, who said he had come to learn the Meller method of Extirpation of the Sac. Meller and Fuchs were away, and Private Docent Bergmeister was in charge of the Fuchs Clinic. We saw the operation performed several times with such skill and dexterity that, with the addition of Smith, of Hartford, we made up a class and learned the technique from Bergmeister. The abundance of material made it possible to have a fresh head at every lesson, and each of us did the operation several times, Bergmeister directing every step with infinite patience. In the clinic cases were operated every day and it was a revelation to see a comparatively bloodless operation under local anæsthesia. As Meller's *Ophthalmic Surgery*, '08, has since appeared in English, it would be superfluous to repeat the technique. He devotes twenty pages to this one operation, and the description is so thorough and concise, and the eight drawings illustrate each stage so perfectly, that one should be able to do it without other instruction.

Meller says: "The proper resection of the lacrimal sac is one of the most difficult operations in ophthalmic surgery. The *difficulty*, especially for the beginner, lies in *finding the sac*." This difficulty is increased by troublesome hæmorrhage if one's technique is not perfect. One never sees the structure so beautifully demonstrated as the illustrations might lead one to expect.

I have found it easier to follow Bergmeister's teaching in one or two particulars, in which he differed from Meller's description. After having exposed the deep fascia and located the anterior lacrimal crest, the closed scissors are entered to the nasal side of the lacrimal groove. This groove is not seen, but its position known from its relation to the anterior crest. The dissection is continued down to the bone, scraping the periosteum, without attempting to preserve it. This slit is continued down to the opening of the duct, which is felt but not seen, and up to the ligament of the internal canthus, which is divided with a snip of the scissor crowded hard against the bone.

Knowing that the sac extends hardly at all above the ligament, one may boldly cut straight down 2 mm. above and thus free the top of the sac. This top of the sac is then firmly grasped with the fixation forcep, which should not be released until the sac is out. Should hæmorrhage occur one may continue the dissection of the lateral wall of the sac, judging from the free median wall about where the lateral must be.

Bergmeister emphasized one other little detail which Meller advises only when the wound is to be left open; that is, the placing of the first suture. In order to prevent any sagging of the lower lid the needle should pierce the nasal side of the wound 2 mm. higher than it does the lateral margin, so that when the suture is tightened the lateral edge is slightly puckered. I have always observed this precaution and there has never been the slightest ectropion.

My routine treatment of a case of epiphora is as follows: The punctum is stretched *moderately* and *slowly*, great care being taken not to lacerate or split it. A small probe, No. 2 or 3, usually the Theobald, is introduced. If an obstruction is met before reaching the sac cocaine and adrenalin are injected. If at the second attempt much resistance is encountered treatment is discontinued until the following day. Should the same resistance be felt on the second day, the negative Galvanic current is attached to probes and five m.a. current used. When the sac has been entered a few drops of cocaine and adrenalin are injected, followed by a syringe full of boric solution. Should this pass through into the nose no probing of the duct is performed, but the same treatment is repeated every few days at increasing intervals.

The presence of any bleeding is evidence of having used too much force. Great care and prudence are required to correct this mistake. It has been a great satisfaction to note the long lasting good results

following these careful procedures. These cases may be grouped as Class A.

Class B: Open to sac, but cannot be syringed through nose. Canaliculus is stretched to receive fairly easily a No. 4 or No. 5 probe, and one size smaller is used to probe the duct. If this passes without undue force, the nose is examined to make sure it has *followed the duct*. As Holmes says (l. c.): "Anyone can make a false passage if enough strength is used." At the next visit, one or two days later, an attempt is made to syringe through the nose *before* probing. One experience of œdema of the lower lid and cheek when the liquid failed to appear in the nose is usually sufficient to teach this lesson.

Right here I want to enter a protest against the prevalent opinion that the treatment of lacrimal obstruction is the proper field for the embryo ophthalmologist. An educated and refined sense of touch is absolutely essential to prevent doing more harm than good.

Class C: A reasonable force, perhaps with electrolysis, fails to secure a passage through the duct. If the epiphora is annoying extirpation of the sac is indicated and strongly advised. Sooner or later these cases will exhibit blenorrhœa and many develop an acute dacryocystitis.

Class D, Acute Dacryocystitis: As Meller says that this condition adds greatly to the difficulty of extirpation I have never attempted it. In these cases, or when a fistula has formed after spontaneous rupture, my practice is as follows: Under nitrous oxide anæsthesia an incision is made deep down to the bone, and somewhat longer than for extirpation. The wound is packed with gauze and pressure applied for an hour. Ether anæsthesia is then induced, and when the gauze is removed the hæmorrhage will have ceased, so that every vestige of mucous membrane and pathological tissue can be cauterized. Finally the duct is probed and curetted. One suture is inserted at the upper angle of the wound, which is packed with gauze, pushed well down to the deepest part. Wound is dressed every day with peroxide, care being taken to push the gauze to the bottom of the wound, and as this gets smaller a lacrimal syringe is used. The results are very satisfactory and the scar is hardly noticeable.

My indications for extirpation are:

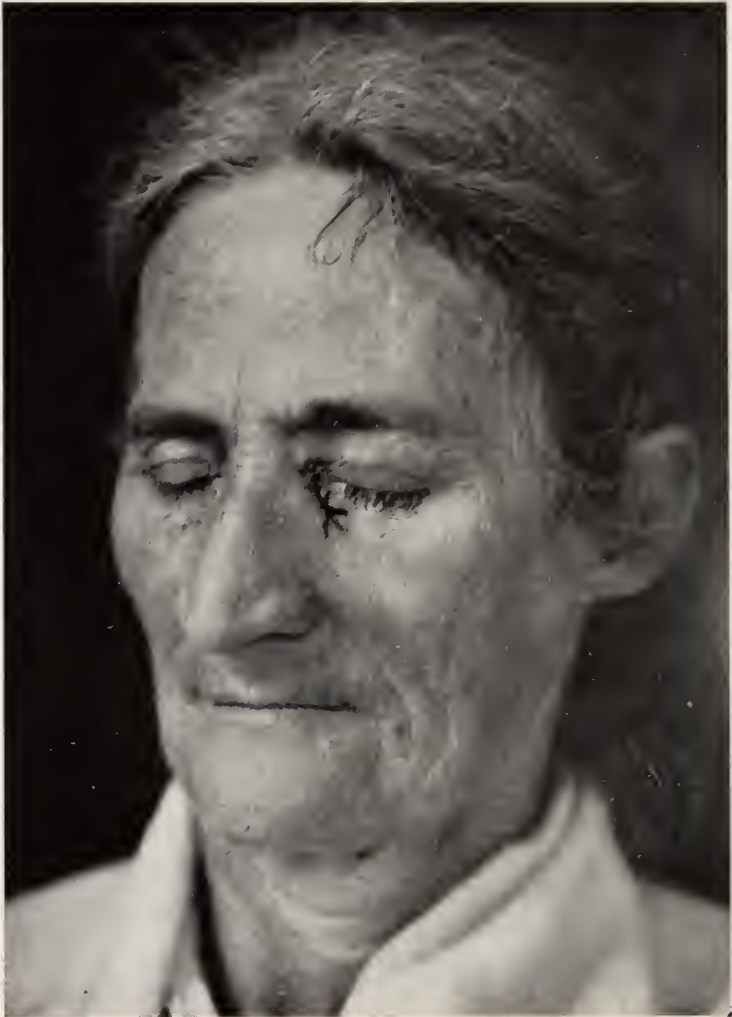
1. A stenosis of the duct, which does not yield easily to a No. 3 probe.
2. Cases of epiphora or blenorrhœa with a history of repeated probing.

FIG. 1.



Case of recurrent dacryocystitis with fistula. Incised and cauterized February 6, 1912. Photo by Dr. Osgood, M. H. H., March 26, 1912.

FIG. 4.



The appearance of the wound on fourth day just prior to removing sutures. Photo by Dr. Osgood, M. H. H.

FIG. 2.



MELLER'S DUCT CURETTE.

The ordinary duct curette is poorly adapted for the purpose. The curve is exactly wrong for scraping the nasal side. I therefore drew the temper of the shank and bent it to the reverse curve after using for the lateral side. The cutting surface is not well adapted and is too large for the average duct.

I have designed a model which has a spring-tempered elastic shank, so that the proper curve for inserting and curetting all sides can be given with the fingers.

FIG. C.



AUTHOR'S ELASTIC SHANK CURETTE FOR LACRIMAL DUCT.

I am not able to report a large number of cases, but all of them have been followed up so that the end results can be reported.

Total number, eleven; all operated at Mass. Homœo. Hospital.

Four are my own private cases.

Two, private patients of Asst. Oph. Surg. Sternberg.

Five are house patients, one of which is reported through courtesy of Prof. Payne, during whose service operation took place.

Youngest, 22; oldest, 73; average age, 51.

Two cases '08.

Two " '10.

Five " '11.

Two " '12.

Healing by first intention, ten cases.

The one failure was due to leaving in a portion of the dome of the sac. This was one of 1911 cases. Ten days after operation there was swelling and fluctuation at upper part of wound. Under general anæsthesia it was re-opened and cauterized, healing by granulation, with scarcely perceptible scar.

The other ten cases were under local injection anæsthesia. (Meller.)

First case was one of blenorrhœa, very persistent, notwithstanding the duct was sufficiently open to receive a No. 12 Theobald probe. The discharge showed staphylococcus pyogenes aureus.

The extirpation was done in order to prepare the patient for extraction of a mature cataract, which was subsequently successfully removed. Four years have now elapsed, and the patient at my request returned for examination. There is no epiphora.

This condition, epiphora, is troublesome at first with all cases, but after a few months it has subsided so completely that only one has consented to have partial resection of the lower lobe of the lacrimal gland. This was done April 12, 1912, the sac having been removed Oct., 1911, nearly six months previously. The secretion was not very profuse, but still enough to be quite troublesome. Meller's technique was exactly followed. The operation is not difficult, and requires but a few minutes. On removing the bandage, twenty-four hours later, there was slight swelling of the lids and conjunctiva. On second day swelling had all subsided and the case transferred to Out-Patient Department. The result will be reported later.

In the series there are one or two others for whom it has been advised, but they are not sufficiently annoyed to submit. One case operated Oct., 1911, made arrangements to enter the hospital in Feb., '12, but the day before wrote: "The water has stopped running from my eye and so there will be no need of my going to the hospital Tuesday as we had arranged."

The lessened secretion has led to the statement that the gland atrophies. This has not been proved. Meller says it is "probably due to a nervous influence."

Eight cases were operated upon because of blenorrhœa. In three the contents of the sac was watery.

Meller advises removal of sutures on fourth day, the idea being to leave them as long as they are of any use. In one case left until the sixth day they were found to have cut through. There should be no swelling of the wound area or surrounding tissue, and very little after pain. If the dissection is clean there is very little pain after the injection of the cocaine until the duct is probed and curetted, but this is not worse than that caused by the passage of a large probe.

Hæmorrhage was extremely troublesome in one case, so much so that wound was packed and left for an hour, after which dissection could be done satisfactorily.

FIG. 5.



Appearance after removing sutures, fourth day; the stitch holes and grooves caused by pressure of the silk are visible. Photo by Dr. Osgood, M. H. H.

FIG. 6.



Sac pulled over probe.

At the end of three weeks it is almost impossible to tell which side has been operated upon.

The Vienna men insist upon inserting a probe into the resected sac to demonstrate that it is intact.

I am very sorry to say that the procedure several times showed that the sac was *not* intact and a search was made for remaining portions. In one case the lower end was closed by a solid stricture.

From the experience of these eleven cases, most of which have been observed for months and years, I am convinced that *extirpation of the sac* is the best treatment for persistent stenosis of the duct.

Holmes states (l. c.) that Meller in '93 reported twelve cases from the Fuchs Clinic, and it would seem that his nineteen years' further experience with the modest statement that "the method recommended for extirpation of the sac has proved eminently satisfactory" justifies one in following him.

But "it is not an easy operation," and the writer has made a somewhat hasty review of current literature and interviewed other oculists to determine what other methods are in vogue. De Schweinitz, Text Book ('06), gives a short description of technique, but omits any suggestion about injection of cocaine and adrenalin. It would seem to the writer that a clean dissection is well-nigh impossible without this preparatory measure. He advises general anæsthesia.

Elliott, Ophthalmic Review ('08), reports 300 cases. He cauterizes dome of sac and lacrimal duct. The reviewer in Knapp's Archives comments: "Why these mediæval measures?" Weeks' Text Book (1910) says: "Meller's operation is one of the best. Stitches should not be removed until fifth to seventh day."

Beard, Ophthalmic Surg. (1910), describes a technique similar to Meller's, but usually uses a general anæsthetic. "Profuse hæmorrhage is rather to be expected" and is controlled by pressure, adrenalin *instillation*, and hot sublimate solution. He scrupulously avoids cutting the canaliculi or the tendooctuli," but he omits the reason for this precaution. He *cauterizes* the "nasal end of the canal."

Woods' System (1911) gives great prominence to Meller's operation, reproducing his eight illustrations and much of the text. One is thus led to infer that the authors of this section, Hansell and Bell, advise this technique.

Edgar S. Thompson, New York (1912) (personal communication), says: "Most of us at the Manhattan follow Meller's technique fairly closely."

Fox, Philadelphia (1912) (personal communication), says: "I am perfectly satisfied with the Meller operation as carried out in Vienna and I am following it. Sometimes I depart a little from the Meller technique, but in the main hold to his operation."

While it is to be hoped that an easier method may yet be brought out, it would seem from the above quotations that up to date the Meller technique is the best.

I have not been able to find any illustration of the microscopic appearance of the normal sac, so that these pathological sections must be studied in the light of the descriptions at hand.

Parsons (Pathology of the Eye, Vol. II, page 750) says: "The sac is lined by cylindrical epithelium, usually two layers, inner layer consisting of very high cells 35-50 u. There is a definite basement membrane. It is doubtful whether the cells ever bear cilia. There are often many goblet cells. Beneath the basement membrane is an adenoid layer of the usual type. It is doubtful if it ever contains follicles normally. The submucosa consists of dense fibrous tissue, which is very vascular especially on the part adjacent to the bone. There is no muscular coat, but elastic fibers are abundant, mostly in the anterior part above the palpebral ligament."

According to Collins and Mayou (Pathology and Bacteriology of the Eye, 1911, page 34): "In the normal state the cilia of the ciliated epithelium work toward the nose and play an important part in removing organisms, debris, etc., which may gain entrance to the lacrimal sac and duct. They also prevent the spread of organisms upward from the nose on the surface of the mucous membrane. * * * The epithelium lining the *mucocele* loses its cilia and desquamates, thus leaving the subepithelial tissue open to infection. If this takes place an acute peridacryocystitis is the result with the formation of an abscess around the lacrimal sac which may rupture externally with the formation of a fistula. If this does not heal the epithelium grownig downward from the skin lines the tract, so that a permanent opening is formed. A more chronic inflammation also occurs around the sac in which there is a lymphocytosis and accasionally the formation of actual follicles in the subepithelial tissue. The subsequent organization following this chronic inflammation leads to permanent fibrous thickening of the sac wall. The epithelium lining the sac in these cases is often several layers in thickness and is devoid of cilia—indeed it tends to resemble epithelium of the squamous variety."

FIG. 7a.



Lacrimal Sac. X70 Sub-Acute Inflammation. Photo
by Brown, M. G. H.

A.—Cavity of sac.

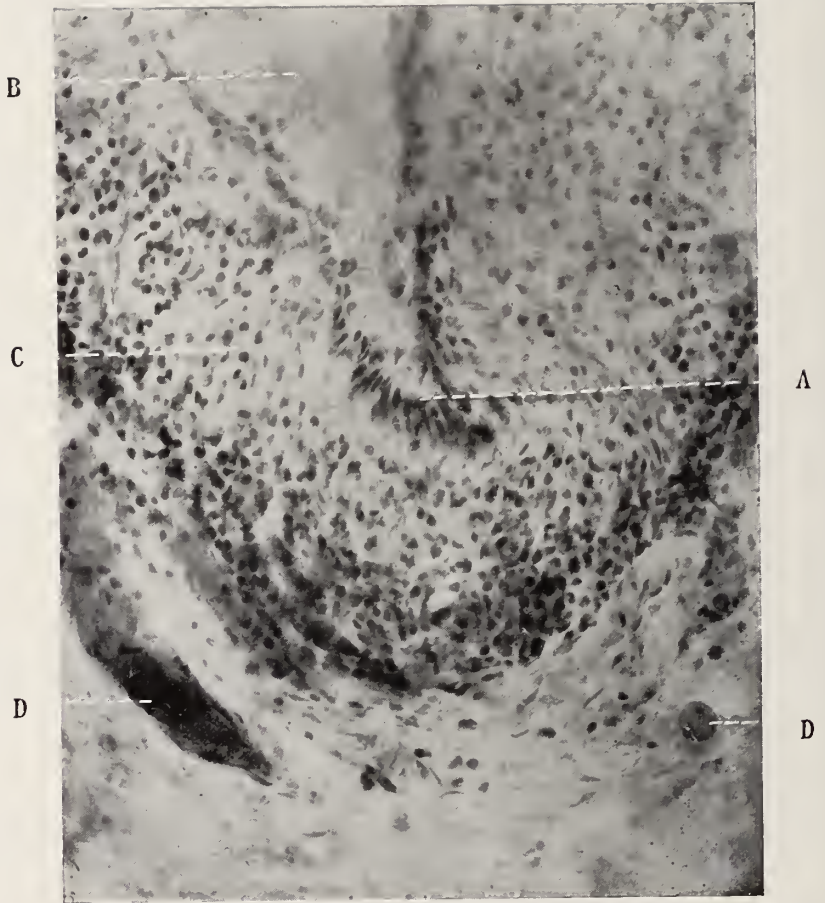
B.—Submucous tissue densely infiltrated with small
round cells.

C.—Stratified columnar epithelium partially decqua-
mated.

D.—Blood vessels in outer connective tissue.

E.—Masses of blood discs lying free in cavity.

FIG. 7b.



Lacrimal Sac. X375 Sub-Acute Inflammation. Photo
by Brown, M. G. H.

- A.—Stratified columnar epithelium partly desquamated.
- B.—Blood discs lying free in cavity.
- C.—Round Cells infiltration of sub-mucosa.
- D.—Blood vessels.

FIG. 8a.



C A B

Lacrimal Sac, lower end. X70. Photo by Brown,
M. G. H.

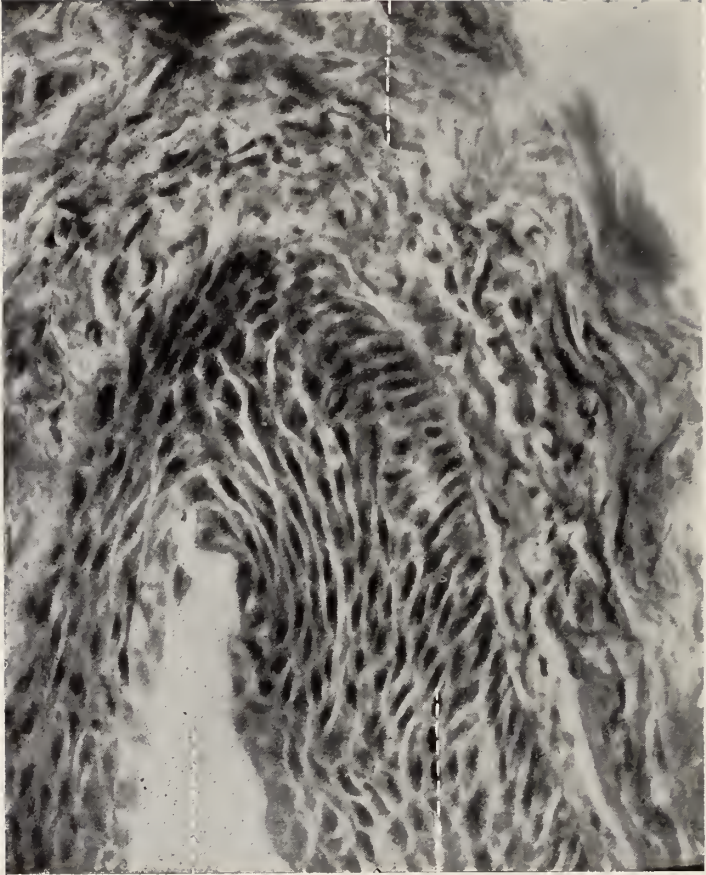
A.—Cavity of collapsed sac.

B.—Stratified squamous epithelium.

C.—Round cell infiltration of connective tissue.

FIG. 8b.

C



A

B

Lacrimal Sac, lower end. X450. Photo by Brown,
M. G. H.

A.—Cavity of collapsed sac.

B.—Stratified squamous epithelium.

C.—Round cell infiltration of connective tissue.

Prof. Watters, who made these sections, has kindly furnished the following report:

"This section (Figs. 7a and 7b) of lacrimal sac shows an irregular outline to the lumen due to changes following collapse after operation. In this cavity are large numbers of blood discs, an occasional leucocyte and some desquamated epithelial cells. The sac is lined by mucous membrane of the stratified columnar type, the cells of which have been desquamated. No cilia are found. In the submucous tissue are large numbers of small round cells corresponding to both the mononuclear and the polymorphonuclear type of leucocytes. Here also are rather numerous minute blood vessels. At one side are tubular glands lined by a form of low cuboidal epithelium. Outside of these areas is a moderately firm fibroelastic connective tissue. There has evidently been present a mild degree of subacute inflammation indicated by a desquamated epithelium, blood discs, and the prominent zone of round cell infiltration.

"Sections from the lower part of the sac (Figs. 8a and 8b) show that the lumen has been partly obliterated since the removal of the tissue. It is lined by a thick mucous membrane. All of the mucosa seems to be of the stratified squamous type. In one part of a section taken from a somewhat higher level there seems to be a distinct transition to the stratified columnar type. The submucosa consists of fibrous tissue rather loose in arrangement and contains numerous small blood vessels, and a moderate number of small round mononuclear cells."

TUBERCULINUM IN PHLYCTENULAR CONJUNCTIVITIS.

RALPH I. LLOYD, M. D.,

Brooklyn, N. Y.

IT is interesting and profitable to occasionally sit down and peruse cleverness of the by-gone physician, and can not but note the some old medical work. We are impressed with the clinical immense advantage we have in our instruments of precision and the laboratory. As proud as we may be of our advances, we are prouder of the old doctors who accomplished so much with so little. We note that they were in the habit of grouping under a certain head diseases which we know are not at all related in etiology, pathology or treatment. If we look at the 1634 edition of "The Complete Works of That Great Chirurgion, Ambroise Pare," under cataract is included glaucoma, because he says that "those having a greenish reflex are best left alone, but those white or yellowish give a good prognosis," or words to that effect. The improved methods and apparatus have enabled us to place these various diseases in proper categories and devised more effectual treatment. This reassignment of diseases has sometimes been carried to a very fine point. In some murder trials the expert neurologist makes us think of the story of the old farmer who found the wood road running into a cow path, the cow path into a rabbit track, the rabbit track into a squirrel track, which ran up a tree. All this, however, is apropos of the idea that more and more is the oculist coming to look upon phlyctenular conjunctivitis as a tubercular manifestation; not perhaps as scrofula is tuberculosis of lymph glands because there the bacilli can be found in the tissues; nor yet like the pleuritic effusion which, upon autopsy at least, can be shown to be associated with actual tubercular process. I profoundly regret that in none of the cases which are included in this report was the skin tested with tuberculin. I have resolved to do so in the future, and think it would be an excellent idea if we would all make it a practice to test as many of these cases as we can and report at these meetings.

In February, 1908, Miss H. came suffering with phlyctenular conjunctivitis of both eyes. She had had several attacks since five years

of age, and is now twenty-one. This attack began in November, 1907; and since that time has been under treatment of a regular oculist. Atropin has been steadily used, and both pupils are now ad max. There are several phlyctenules on the limbus of each cornea, sensitiveness to light, lachrimation and pain. She has been taking tincture of iron, and is very much relieved by cold air and very much aggravated by warm air. Pulsatilla tinct., gtt. 5, t. i. d., in one week relieved the congestion, pain and photophobia to such an extent that the atropine was discontinued. The circumciliary congestion hung on with an occasional aggravation until tuberculinum 30x, B. & T., was given four times a day. The symptoms cleared up entirely, but in August for one week there was an outbreak which bothered but little, and another September. She has had no trouble since.

I do not claim that tuberculinum is entitled to the credit for all of this, indeed I think pulsatilla did the most, but tuberculinum cleared it up, and I gave it because pulsatilla seemed to have outgrown its usefulness, and tuberculinum is a chronic pulsatilla.

This case with the number of reports and opinions in various journals that this disease was upon a tubercular basis suggested that perhaps there was a wider field for the remedy, and I concluded to try it in cases with a tubercular history unless some other remedy was indicated.

March, 1910, I was called to see the worst case of phlyctenular conjunctivitis that has ever fallen to my lot. A little girl aged 4. In common with other children in the family had had measles. After the measles the eyes became congested, and at time of first visit was a pitiable object. Several phlyctenules on each cornea, both corneas were opaque, and the iris could not be seen. Profuse mucopurulent discharge from nostrils, pustules on lower lids and marked redness and great swelling of lower lids and cheeks, due to constant moisture and lowered vitality of skin. Rattling cough with small mucous rales in lungs, particularly upper parts. Temperature running about 99° to 100° at night. Child looks sick and seeks the darkest corner of the house, and lays on the floor in the corner and refuses to be touched. She was so cross and uncomfortable when in any other position but lying in the dark corner with arm before eyes that family left her there in self defense.

There was blood and albumen in the urine. This would suggest that the original ailment was scarlet fever, but the behaviour of the

eyes of all the children when sick, the scanty and flaky desquamation, and the fact that the doctor in charge was "on the job," led me to think otherwise.

Apis and cantharis were given in alternation because we thought the greatest danger was not blindness but death.

In a week the kidney condition had improved. The eyes and the other conditions were the same. Atropine was recommended and used from the first. This child was one of twins, and its mate had died in the first year of life with a "nasty eruption," as the family expressed it. The child was given tuberculinum 30x, and the improvement was steady and noticeable from the first. The appetite and disposition changed. She could be taken into the air if the eyes were covered. She would eat more and was tractable. In a month she had progressed very very much indeed. But it was four months before the congestion and opacity and tendency to fresh outbreaks were eliminated.

Just before she was discharged her brother, aged 20, was taken ill with pleuritic effusion, and when this had cleared unmistakable evidence of tubercular invasion of the apices of both lungs was found.

About six months ago, the adenoids, which were left after all the catarrhal trouble in nose and respiratory organs, were removed, and she is in excellent condition.

June 17, 1910, a little girl, aged three, was brought to the office. Her father lies at the point of death with tuberculosis. For two months her eyes have been inflamed, and she has been losing weight, is cranky; quiet only when left to find some dark spot. She has had convulsions twice, and the change in her disposition is so marked that her physician fears tubercular meningitis. She will eat but little, look sick, and there are several ulcers on left cornea with infiltration of cornea about each one. Pustules on skin of lower lid, tissues about left eye are swollen and red from constant moisture. No rales or cough. She was given tuberculinum 30x, four times a day, and atropine 1 per cent., gtt. 1, t. i. d., instilled in the eye because of the intense congestion. Once a day is my usual direction for atropine in these cases, but it was increased because of the intense ciliary congestion. In one week the change for the better was remarkable. In a month she was free from complaints. There was relapse for a week or two the next month, but this cleared up promptly.

The case was a colored child, aged 5. In the left axilla was a lump of enlarged glands, size of an egg. The left eye was like all these

cases, congested, sensitive to light and watery. Several blisters on limbus. As there was no clear indication for another remedy, she was given tuberculinum, and in two weeks was well. She had improved not only as far as the eye was concerned, but in weight, appearance and appetite. She lost the apathy and weakness which was apparent at first. A few months later, as the glands continued to increase, her physician removed them and they were diagnosed as typical tubercular glands by their macroscopic appearance. I regret I did not test these patients for the tubercular cuti reaction.

I hope this paper may suggest the use of this remedy in cases with a tubercular family history or other more pronounced indication of tuberculosis. If more of us try it we will know whether this remedy is all it promises to be.

Many look upon phlyctenular conjunctivitis as a light ailment. There are cases of it where the condition underlying brings the child to death's door. Two of these cases were certainly desperate. I have said nothing about the general treatment, such as fresh air, better food, better hygienic surroundings, etc. These cases were all in private practice and the surroundings and food were good. But you cannot get some of these cases into the fresh air, and you cannot get them to take lots of milk and cream, fruit, etc. If you can get the improvement in the underlying condition then the child will be willing to go out and will want to eat more. It is then easy.

450 Ninth Street, Brooklyn, N. Y.

REPORT OF SIXTY-FIVE CONSECUTIVE CATARACT CASES.

DEAN W. MYERS, M. D.,

Ann Arbor, Mich.

IN presenting the appended report I appreciate, and with regret, the fact that it is lacking seriously in one important feature. The conditions in the Ann Arbor clinic are peculiar and have grown more embarrassing from year to year with the growth of the clinic, while the facilities have not increased and are inadequate for handling the number of cases presented. In consequence I am painfully aware that a large number of these cases have gotten away from us without having a refraction taken. Many of them are sent home to return later and do not return, while many of them leave the hospital before being discharged and are consequently lost track of. The clinic, as you know, is a free clinic and attracts a large number of irresponsible patients. However, in speaking of the visual results, the healing, the pupil and the media in each case was such that the vision must have been reasonably good had a refraction been taken.

In the first place I wish to state that the operation for removal of cataract in its closed capsule was attempted in every case, except in the few mentioned and then for some very definite reason. Irido puncture, was made following extraction in forty-three cases. The results have seemed to be considerably better in those cases in which a wide slit was made instead of the narrow puncture formerly advocated. Fluid vitreous was observed in nineteen cases.

In thirty-five cases central circular pupil was obtained. In seven cases central oblong pupil was obtained. In eight cases the pupil was but slightly displaced upward, making a total of fifty cases in which the iris was replaced in the anterior chamber and retained there.

Iridectomy was performed in one case following delivery of the lens and iridectomy was performed before delivery of the lens in nine cases.

Capsulotomy was performed in nine cases and the capsule ruptured during the process of delivery in one case. Secondary needling was performed in one case. Iris prolapsed and had to be cut off in secondary operation in five cases. Hemorrhage followed two extractions and

the iris was button-holed during the incision in one case. Three cases were operated upon who had no projection of light before the operation.

While visual results are not obtained in most of these cases I am satisfied from comparison with the operation of iridectomy and capsulotomy that the average is as good as that obtained under the old operation of iridectomy and capsulotomy. Neither do I believe the loss of vitreous to be more frequent, and, in fact, the loss of vitreous has seemed so little to interfere with the results that we have taken to paying very little attention to it. Even in some cases a large loss of vitreous did not apparently affect the results in any way.

From a cosmetic standpoint the operation without iridectomy is ideal. The operation for removal of the lens in its closed capsule is certainly ideal in that it does away absolutely with the necessity for secondary needling. I admit there may be some question as to whether iridectomy should or should not be performed, but the results tabulated in this report and that of two years ago lead me to believe that I am justified in continuing the operation. I shall welcome every criticism and discussion, and only wish that this report might be more complete particularly as to visual results. I realize, however, that visual results after all do not tell anything because they vary so widely under any method of procedure. One case may obtain 20/20 vision with iridectomy and capsulotomy, while another case apparently of equal merit may obtain 20/200 vision. This is also true after extraction in closed capsule without iridectomy. I have had a number of cases in private practice that have obtained better than 20/30 vision. And there are also many having vision ranging from 20/50 to 20/80, and even as low as 20/200. I understand Green, of Dayton, Ohio, who is probably the most prominent man in this country following the Smith technique, claims a very large percentage with 20/20 vision. I have not seen his last report, but certainly if he has obtained 20/20 vision in anything like half of his cases, he has a remarkable report to present.

No.	Age	Sex	Form of Cat.	Eye	Oper.	Pupil	Results.	Remarks.
1	72	M.	Nuclear.	R.	S. M.	Displaced upward and ova'.	Vision good. No Ref.	Lens adherent at superior border. Large escape of fluid vitreous. Collapse of eye ball. Pupil oval, displaced upward.
2	79	F.	Nuclear.	R.	S. M. I. P.	C. C.	No Ref.	
3	48	M.	Nuclear.	L.	Iridectomy after delivery.		No Ref.	Iritis followed.
4	76	F.	Nuclear.	L.	S. M. I. P.	Slightly irregular.	No Ref.	Pupil central but slightly irregular.
5	65	M.	Nuclear.	R.	Capsultomy I. P.	C. C.	No Ref.	Slight hemorrhage into anterior chamber.
6	76	M.	Nuclear.	R.	S. M. I. P.	Cir. displaced upward.		Pupil circular, but displaced upward slightly.
7	54	F.	Nuclear.	L.	Cap. and irodec.		Poor vision.	Patient jerked head when primary incision was made, causing knife to be withdrawn. Incision completed with difficulty. Iritis followed.
8	71	F.	Nuclear.	L.	S. M. I. P. Capsul.	C. C.	No vision.	Blind for 3 years. Does not project light. Failing vision for 8 years.
9	60	M.	Nuclear.	R.	S. M. I. P.	C. C.	No vision.	Blind 37 years. Does not project light.
10	69	M.	Nuclear.	L.	S. M. I. P.	C. C.	No vision.	Cataract developed within few months.
11	69	M.	Nuclear.	R.	Capsul. I. P.	C. C.	No vision.	Does not project life.
12	72	M.	Nuclear.	L.	S. M. iridect.	Secondary pupil C. Elong.	+ 9 D. S. = 20,30 + 12 = 1m.	Iris buttonholed with incision. Pupil central, but slightly elongated.
13	77	M.	Nuclear.	L.	S. M. I. P.	C. C.	No Ref.	Iritis resulted. Cleared in 15 days. Vision good.
14	53	M.	Nuclear.	R.	S. Ex. Capsul Ruptured on Del.	Irregular displaced upward.	No Ref.	Lens substance almost fluid. Capsule needed. Vision much improved.
15	60	M.	Nuclear.	L.	S. M. I. P.	Centrally placed, elongated laterally.	No Ref.	Escape of fluid vitreous same patient as case 9 three weeks later.

No.	Age	Sex	Form of Cat.	Eye	Oper.	Pupil	Results	Remarks
16	74	M.	Nuclear.	R.	S. M. I. P.	C. C.	+ 10 D. S. 3 cax 60 + 14 D. S.= 3 cax 60	Cataracts in both eyes. Project light.
17	73	F.	Nuclear.	R.	S. M. I. P. Lens del. on loop.	C. C.		Patient nauseated and vomited several times shortly after leaving the operating room. First dressing incision gaped open and filled with blood clot. Later closed, could see light.
18	57	F.	Nuclear.	L.	Capsultomy. I. P.	C. C.	+ 12 D. S. = 20/50 + 15 D. S. = 37 m. m.	Cataracts in both eyes.
19	74	M.	Nuclear.	L.	S. M. I. P.	C. C.	No Ref.	Escape of fluid vitreous.
20	71	M.	Nuclear.	R.	S. M. I. P.	Central. Slightly irregular.	No Ref.	Very fluid vitreous. Large amount. Iritis followed. Easily controlled.
21	84	M.	Nuclear.	R.	S. M. No puncture.	C. C.	No Ref.	Escape of fluid vitreous. Patient restless, moved while incision was being made. Small prolapse. Pupil displaced upward.
22	56	M.	Nuclear.	L.	Capsulotomy. I. P.	C. C.	No Ref.	Pupil central but slightly irregular at first dressing, obtained C. C. pupil with atropine 1 per cent.
23	70	M.	Nuclear.	L.	S. M. I. P.	C. C.	+ 10 D. S. = 20/120	Small escape of vitreous Iritis followed, yielding readily to treatment.
24	74	M.	Nuclear.	L.	S. M. I. P.	Cir.	+ 7 D. S. = 20/120	Collapse of cornea. Slight prolapse at first dressing. Pupil displaced upward. Iritis followed.
25	61	M.	Nuclear.	R.	Iridect. and Cap.		+ 9 D. S. = 20/120	Patient unruly, continually moved. Did not obey orders.
26	70	M.	Nuclear.	L.	S. M. W. I. P.	Cir.	No Ref.	Slight prolapse of iris at first dressing. Foreigner unable to talk or understand English.
27	60	M.	Nuclear.	L.	S. M. W. I. P.	C. C.	No Ref.	Pupil slightly flattened on top at first dressing. Gradually rounded.

No.	Age	Sex	Form of Cat.	Eye	Oper.	Pupil	Results	Remarks
28	84	F.	Nuclear.	R.	S. M. W. I. P.	C. C.	No Ref.	Cataracts in both eyes Pro- jects light.
29	55	F.	Nuclear.	L.	S. M. W. I. P.	C. C.	No Ref.	Case 24 in old report.
30	64	F.	Nuclear.	L.	S. M. W. I. P.	C. C.	+ 9 D. S. = + 1 cax = 20/50	Gradually failing vision—pro- jects light.
31	45	F.	Nuclear.	R.	S. M. W. I. P.	C. C.	+ 11 D. S. = 20/80	Escape of fluid vitreous. Lens delivered on loop. Iritis followed. Hard to control. O. K. at present.
32	72	M.	Nuclear.	L.	S. M. Iridectomy.	C. C.	No Ref.	Same case as 20. Patient very refractory. Lens de- livered on loop after iridec- tomy. Iritis followed.
33	66	F.	Nuclear.	R.	S. M. W. I. P.	C. C.	No Ref.	Escape of fluid vitreous. Hemorrhage into anterior chamber. Iritis followed. Recovery.
34	70	F.	Nuclear.	R.	S. M. W. I. P.	C. C.	+ 10 D. S. = + 1 cax 150 = 20/200	Very slight prolapse at time of first dressing. Slight iritis followed.
35	60	F.	Nuclear.	L.	Iridectomy. Collapse of ball.		+ 45 D. S. = 20/200	Large escape of fluid vitreous. Hemorrhage in ant cham- ber. Capsule attached to lens. Both very hard.
36	68	M.	Nuclear.	L.	S. M. W. I. P.	Displaced upward.	+ 7 D. S. = + 2 cax = 20/120	Escape of vitreous lens very soft.
37	67	M.	Nuclear.	R.	S. M. Iridectomy.		+ 7 D. S. = + 5 cax 45 = 20/80 + 14 D. S. = + 5 cax 45 = reads 1m.	L. E. operated two years ago. Iridectomy good results.
38	65	F.	Nuclear.	L.	S. M. No punc- ture.	C. C.		Large escape of vitreous, very blind, collapsed ball, vis- ion not good. Fundus changes.
39	72	M.	Nuclear.	L.	S. M. W. I. P.	C. C.	+ 6 D. S. = + 5 cax 150 = 20/120	Small escape of vitreous
40	74	M.	Nuclear.	L.	S. M. W. I. P.	C. C.	No Ref.	Very unruly after leaving oper. room. Got out of bed and walked around first night. Prolapse of iris.

No.	Age	Sex	Form of Cat.	Type	Oper.	Pupil	Results	Remarks
41	79	F.	Nuclear.	L.	S. M. W. I. P.	C. C.	Lenses did not help.	Became suddenly blind after exposure to sun. Cataracts developed quickly—fundus changes.
42	60	M.	Nuclear.	R.	S. M. W. I. P.	C. C.	No Ref.	Lens capsule ruptured, needled afterward and vision helped materially.
43	67	M.	Nuclear.	L.	S. M. W. I. P.	C. C.	No Ref.	Escape of vitreous, lens large and soft. Slight iritis followed.
44	63	M.	Nuclear.	L.	S. M. W. I. P.	C. C.	Sees 20/200 No help from lens.	Small escape of vitreous, lens large and soft.
45	57	M.	Nuclear.	R.	S. M. W. I. P.	C. C. After operation.	No Ref.	Pupil projected upward, slight prolapse of iris at first dressing. Unruly patient.
46	79	M.	Nuclear.	R.	S. M. W. I. P.	After operation C. C.	No Ref.	Incision not closed at first dressing. Slight prolapse of iris and vitreous.
47	69	M.	Nuclear.	R.	No puncture. S. M.	C. C.	Sees 20/200 No help from lenses.	No complications.
48	34	M.	Nuclear.	R.	Simple Extra. iridectomy.		Vision good.	Large escape of vitreous, lens large and soft.
49	64	M.	Nuclear.	R.	S. M. W. I. P.	C. C.	Vision good.	
50	60	F.	Nuclear.	L.	Simple Extraction. Capsulotomy. I. P.	C. C.		Small escape of vitreous—lens substance fluid. Indian who could not talk or speak English.
51	22	M.	Traumatic Calcareous.	L.	Lens delivered with forceps. Iridectomy.	Key hole.	None.	No projection of light before operation. Oper. desired for cosmetic reasons.
52	78	M.	Nuclear.	L.	S. M. W. I. P.	C. C.	No Ref.	Small escape of vitreous.
53	69	M.	Nuclear.	R.	S. M. W. I. P.	C. C.	No Ref.	Small escape of vitreous.
54	52	F.	Nuclear.	R.	S. M. W. I. P.	C. C.	20/50	Capsule ruptured. Needling will probably improve vision.

No.	Age	Sex	Form of Cat.	Eye	Oper.	Pupil	Results	Remarks
55	53	M.	Nuclear.	L.	S. M. Iridectomy.	C. C.	Not good.	Corneal scar (central) made iridectomy necessary. Some loss of vitreous.
56	52	F.	Traumatic.	L.	S. M. W. I. P.	Key hole.	20/50	Capsule ruptured. Needling will probably improve vision. Same case as 54.
57	78	F.	Nuclear.	R.	S. M. W. I. P.	Pupil displaced upward.	20/200	Patient vomited several times, very restless. Slight incarceration of iris in wound. Small hemorrhage into anterior chamber. Slight iritis followed in 3 weeks.
58	72	M.	Nuclear.	L.	Incision, lens escaped.	Pupil displaced upward.	Not good.	Violent spasm of lids. Pro-lapsed vitreous and lens at once following incision. Almost entire vitreous body escaped.
59	62	M.	Nuclear.	L.	S. M. In	Wide key hole.	No Ref.	Lens extracted in capsule without iridectomy. Iris replaced beautifully. Pupil C. C. patient contracted lids, violent prolapsing iris and vitreous necessitating iridectomy.
60	78	M.	Nuclear.	R.	S. M. W. I. P.	Central slightly elongated.	No Ref.	Small escape of vitreous.
61	72	M.	Nuclear.	L.	S. M. W. I. P.	Pupil projected upward.	No Ref.	Lens hard and of peculiar shape, delivered on loop. Escape of vitreous. Slight incarceration of iris.
62	40	M.	Traumatic.	R.	Incision, capsulotomy lens removed in loop.	Key hole.	No Ref.	Minus tension of eye ball necessitated capsulotomy and removal of lens on loop.
63	70	M.	Nuclear.	L.	S. M. Capsulotomy. W. I. P.	C. C.	No Ref.	No complications. Patient weighed 335 lbs.
64	47	M.	Nuclear.	L.	Ext. in Capsule with iridectomy.	Key hole.	No Ref.	Great tension in vitreous resulted in its escape after lens had been delivered. Very large lens.
65	60	M.	Nuclear.	L.	S. M. W. I. P.	C. C. Horizontal elongated.	No Ref.	First dressing incision not entirely closed. Slight loss of vitreous. Pupil central with slight elongation horizontally.

SOCIETIES.

THE AMERICAN HOMŒOPATHIC OPHTHALMOLOGICAL, OTOLOGICAL AND
LARYNGOLOGICAL SOCIETY.

Presidential Address for 1912.

G. A. SUFFA, M. D.,

Boston, Mass.

PHYSICIANS and Surgeons of the American Homœopathic Ophthalmological, Otolological and Laryngological Society, I welcome you to the twenty-fifth annual meeting now in session, but before offering you the substance of my address, I desire to express my appreciation of the honor you have conferred upon me by electing me to the highest office which it is in your power to bestow. I also wish to thank the officers who have worked so faithfully and so well, one of them, as I know, under most adverse and trying circumstances, which would have amply justified him in throwing up his hands if he had not had the courage to stick to his post. To these, to the chairman of the symposia and the members who have prepared measure of success this meeting may achieve.

My theme, in addressing you today, will be fourfold. First, I shall call your attention to the fact that the trend of the practice of medicine today is largely social, through public measures for the prevention of disease rather than individually curative; that this impulse is rapidly becoming dominant, and that the practice of medicine, especially diagnostically, is rapidly being placed on a firm scientific basis by means of liberally endowed research work, principally by the regular school. Secondly, that strenuous efforts are being made by the regular school to place therapeutic measures on this same firm scientific foundation, that "drugging" is being done away with, and that therefore our school can not rest in false security upon the investigations of a bygone century while others are searching honestly and diligently for the light of truth. Thirdly, that the movement for scientific methods in the prevention and treatment of disease will work marked changes in the future for medical practice in its various phases, including medical education. Fourthly, that we should advo-

cate a national standard for the control of medical education and establish a national beneficiary medical institute for original research which will not only benefit the profession, but do important service for humanity.

Today many diseases whose cause was unknown or merely conjectured but a short time ago, are known to be due to specific organism, so that their diagnosis has become a positive scientific fact, and in many instances it is possible to speedily trace and eliminate the original source of the pathogenic organism and stop their further distribution. Epidemics, if allowed to start at all, are usually of short duration, and as this kind of knowledge is extended, they should become less frequent until it will finally come to mean disgrace for that community whose negligence has destroyed its immunity.

With added knowledge of the cause of disease its treatment has naturally undergone a marked change, its purpose being either to destroy the micro-organisms or modify their action within the body by reinforcing its resistance, the exhibition of drugs being reserved for troublesome complications or the palliation of especially severe symptoms, but not for curative effect.

Not a few of the prominent regular practitioners are proscribing rather than prescribing drugs, threatening, if they have not already done so, to establish a school of therapeutic nihilists. "Shotgun" prescriptions are no longer tolerated, and the patient is at least spared the necessity of combating drug action in addition to bearing the burden of the disease.

If homœopathy has no more to its credit than doing away with the practice of "drugging," it has a historical significance of no little consequence, but we must not rest, contented upon our laurels here, and complaisantly claim new and scientific methods of treatment as homœopathic because they may suggest in some remote way the law of Hahnemann. To claim that serum therapy is homœopathic is far fetched. It seems to me to be no more homœopathic than allopathic, but merely a new scientific truth won by honest investigation, belonging to no school or pathy in medicine but to that universal fund of human knowledge which is steadily bearing us toward the time when disease will be merely the penalty of neglect, for immunization is the ideal toward which all eyes are now turned.

Careful scientific research has brought us to the point where no "pathy" can dogmatically assert the efficacy of a method of cure which

does not take into consideration the presence of known micro-organisms as the cause of disease. We, as homœopaths, if we are to be counted in the future, must not only know the physiological and toxic action of the drugs we use, but be able to demonstrate their usefulness in aborting disease, checking its severity, or shortening its duration. If we cannot do these things by our methods of administration, we are certainly not justified in the use of strong drugs, especially if their action is not well known, and poisonous doses should be prohibited absolutely. Alexander Pope, however, has well asked—

“Who shall decide when doctors disagree,
And soundest casuists doubt like you and me?”

and after all our finespun theories, it must come to this, that “the proof of the pudding is in the eating.”

Neither the scientific physician nor the discriminating public will be satisfied with anything less than the observation of a long series of cases placed under as nearly identical conditions as possible and treated by various methods to determine by this final test, from which there can be no appeal, which should survive.

As assistant superintendent in an old school hospital, after having received my first degree in medicine, I was in a favorable position to observe the effect of large and heterogeneous doses of medicine, and I became convinced of the fallacy of inflicting the double load of drugs and disease products upon the long suffering patient, thus increasing the symptoms, aggravating the disease and delaying recovery, if it did not result even more seriously.

No promise of financial benefit would have been sufficient to induce me to undertake the independent practice of medicine equipped with such ineffective, even dangerous weapons against disease. It was in this manner that I became impressed with the immense advantage that homœopathy enjoyed over her rival in the use of drugs. Since then the movement toward the elimination of drugs has become general and allopathy is obviously affected more seriously than homœopathy by it, but we cannot maintain our principle today by making claims which cannot be substantiated, as, for instance, that the exhibition of any of our remedies will be curative in a disease known to be caused and continued by a specific pathogenic organism for whose control scientific medicine has provided an efficient antidote.

These are plain words, but as a friend of homœopathy, I believe that it is necessary that we bestir ourselves if we are to keep pace

with the march of progress in medicine, and, if our principle is right, spend our best efforts to keep it where it belongs, by modern scientific methods. To do this we must be careful not to claim more than we can prove and not depend too much upon the vague investigations of a past century for our *materia medica*, but prove it at once in the light of the present century. Then, and then only, shall we merit the support of a discriminating public and the respect of all scientists.

In taking up the third division of my theme, it will be necessary to consider briefly the number of physicians in the country and the proportionate number of people they serve.

Page fourteen of the Carnegie Foundation Bulletin, No. 4, states "that there is one doctor in the United States for every 568 persons," and page seventeen, "that the United States is producing two to three times as many doctors as the country can assimilate." Thus we have indisputable evidence that there are an excessive number of practitioners at the present time in the United States. If the present rate of production should continue for the next twenty-five years and preventive medicine makes no more rapid strides than it has already made in the past twenty-five years, which is improbable, this plethora of doctors will obviously become greatly aggravated even if conditions were not such as to require a smaller number of doctors. Increasing hospital facilities are also constantly making inroads upon private practice, so that the inevitable result must be a tremendous reduction in the average income of medical men in this country in the near future. That this condition will not last we cannot doubt, for as water seeks its own level, so will this problem solve itself. Some who have recently begun the practice of medicine, or shortly intend to do so, will give up and enter other fields, and the inevitable raising of the standard of medical education will debar others from entering the profession on account of the increased cost of preparation.

View this matter from as optimistic a standpoint as you may, the medical profession as a whole is soon coming face to face with a serious economic problem, so that where today there are isolated cases in which the family physician, faithful for years, is obliged to accept alms, the time will soon come when these cases will be no exception.

What then is to become of the older men, who have devoted a large part of their time to charity, but have fallen upon evil times and are being displaced by younger and more active men? Their usefulness is certainly not at an end, for they are men who have been carefully

trained, whose judgment has been ripened by years of personal experience in the treatment of ailing humanity and whose unselfish lives are the best evidence of their devotion to their profession. These men whom it should be our privilege to honor are not qualified to enter other occupations, if the world could afford to lose the aid which they are so well equipped to give in the search for new truths in our effort to eliminate disease.

This brings us up to the fourth division of my subject, as it shows the necessity for a national institution of a beneficiary nature to do original research work, drug proving, etc., where these devoted men may find occupation in the work for which they are eminently fitted by life, long training and experience. It seems the irony of fate that a body of men who, as a whole, are ever ready to not only minister to the needy without hope of return, to give of their time and strength to charitable work, both individual and institutional, many times at the expense of their own income and even health, the whole aim and purpose of whose lives is to prevent disease and thus diminish their own chances of livelihood, it is, I say, the irony of fate that these men should be left to spend their declining years in destitution on account of a condition to which they have unselfishly contributed by dedicating their lives to the benefit of mankind.

The scope of such an institution as I have suggested will be broad, including investigation of any sort which will throw light upon the prevention or cure of disease, but whatever it is it will be carried on with the scrupulous and unprejudiced honesty which science demands of those who would learn her secrets.

Moreover, I believe we should advocate a national commission whose duty it shall be to fix the standard of medical education in this country and see that all medical colleges comply with it.

Such a commission, with power to regulate the varying requirements for the legal right to practice medicine now prevailing in the various states of the Union so that they would conform to one universal standard thus doing away with the various State Boards of Registration; would obviously do more for the advancement of our profession in this country than years of spasmodic reciprocity, toward which, like a promising but unresponsive brazen serpent in the wilderness of our discontent, we have been vainly lifting our weary eyes.

By means of a scientific devotion to work in "proving all things" rather than in reliance upon a past however honorable, by founding a

national institution for research work such as I have suggested and by demanding a universal standard of proficiency, I believe homœopathy may prove her right to exist and continue the blessings which she has so liberally bestowed upon suffering humanity in the past.

ALUMNI ASSOCIATION, NEW YORK HOMŒOPATHIC MEDICAL COLLEGE AND
FLOWER HOSPITAL.

The following officers were elected at the annual meeting held Decoration Day afternoon in the college, upon Alumni Day: President, W. F. Honan, '89, New York; Vice-Presidents, H. A. White-dent, '79, Providence, R. I.; H. Worthington Paige, '84, Oneonta, N. Y., and J. F. Ackerman, '90, Asbury Park, N. J.; Recording Secretary, S. B. Moore, '01, New York; Corresponding Secretary, Wm. Lathrop Love, '94, 857 Lincoln Place, Brooklyn, New York; Treasurer, Harold A. Sanders, '05, 864 St. John's Place, Brooklyn, New York; Necrologist, C. Ver Nooy, '88, 146 W. 64th St., New York; Executive Officer, J. Perry Seward, '93, New York; Alumnus Trustee, W. W. Blackman, '77, Brooklyn, New York; Directors for three years, C. H. Wintsch, '95, Newark, N. J.; R. F. Rabe, '96, New York, re-elected without opposition; J. W. Dowling, '86, New York City; R. A. Stewart, '00, New York City; W. G. Crump, '95, New York City; and J. W. Allen, '95, New York City.

Vasomotor Ataxia.—Constrictive, dilatative or mixed—may affect any tissue, region or organ with multiform symptoms; angioneurotic edema and angioneurotic congestion of various portions of the gastro-enteric tract have been demonstrated. Congestions, edemas, acute varices have been seen—in the conjunctiva, retina, nose, lips, mouth, tongue, pharynx, larynx, trachea, esophagus and rectum; they may occur in the bronchi, appendix, gall ducts, pancreatic ducts, ureters, neck of the bladder, etc. Realization of this fact clears up many a perplexing case.—S. S. Cohen, *Med. Rev. of Rev.*, Jan., 1912.

HOMŒOPATHIC MATERIA MEDICA AND THERAPEUTICS.

DEPARTMENT EDITOR, PHILIP RICE, M. D.

THE VALUE OF INTERNAL MEDICATION IN EYE DISEASES.

MILTON RICE, M. D.

IN no department of medicine is a thorough knowledge of materia medica of more value than in the treatment of the eye, ear, nose and throat, nor is there one in which it is more often neglected. In most of these diseases, except such as are due to injury or infection from without, the constitutional and temperamental elements of the patient play such an important part that they should receive our most painstaking consideration. If this is not done, our success must of necessity be mediocre.

Unfortunately our text books are so constructed as to make the study and application of this important subject so complicated that the average busy man will turn to it, if at all, in rare emergencies only. To simplify this and make the subject more interesting and useful in our work is my excuse for briefly presenting our more important remedies in their action upon the eye.

Each remedy in our materia medica possesses a "red strand" or characteristic action which differentiates or distinguishes it clearly from every other. In some of its symptoms it may be similar or quite like it, yet in its essential features it presents its own picture or individuality. This is just as true of our remedies as it is of the people to whom we are trying to fit these remedies. This is by no means a new idea, for most of our materia medica students have been trying, to a greater or less degree to attain this object. It will be my purpose, however, to apply this principle to the best of my ability, to this limited group of diseases, and as far as possible, emphasize in every way the points which, as a result of my study and experience, I have found possess these important distinguishing features referred to. The first remedy I shall take up, and is often the first remedy to be thought of when called upon to prescribe, is Aconite. The action of Aconite and its field of usefulness in eye troubles is so marked and distinct in its manifestations and so important that we cannot afford to

overlook it for a moment in eye diseases. It has a set of marked characteristics, and while it covers a wide range of action, these characteristics run all through it, and if once well impressed upon our mental vision will never be forgotten.

The causative factors in eye diseases in which Aconite is needed are quite well defined and are the starting point of many eye diseases. They are exposure to cold or cold dry winds, injuries from foreign bodies, and inflammation following surgical operations.

The effects are equally well defined, and when absent Aconite is not the remedy. These are inflammation—sudden, acute, violent. A patient will be exposed to a cold wind or receive an injury, and there will follow a sudden, violent inflammation. The pain under such circumstances will be very intense, so violent in fact that the sufferer will seem to be unable to bear it, and this will be aggravated by the least motion and touch. Photophobia will be intense and lachrymation profuse. The pupil may be contracted and there may be a blue ring around the cornea and severe aching in the eyeball, and this pain will in all likelihood extend down to the face.

If the suddenness of the onset, the violent nature of the pain and inflammation and the causes therefor are borne in mind the selection of Aconite will be easy.

Other subjective symptoms are a sensation of dryness of the conjunctiva, or a feeling as if full of sand. The eye is very sensitive to sunlight. This is an important remedy in "snow blindness." Belladonna, very similar in some of its aspects, is worse from artificial light.

As I have already indicated, Aconite is an acute remedy usually. When the disease, whatever it may be, for which it is indicated, passes beyond this acute stage, some other and a deeper acting remedy will be called for, something which has for its object the elimination of whatever constitutional taint there may be present, and which prevented Aconite from completing the cure. In such a case, Sulphur being the chronic of Aconite, may be the remedy.

Temperamentally, Aconite fits a vital nature best, one who is strong, robust, active, and in whom all symptoms are apt to be prompt, active, intense.

Agaricus muscarius. The action of *Agaricus* is upon the motor centers, giving rise to a train of muscular phenomena which are very troublesome in the treatment of the eye. We have other remedies of a

similar nervous action, such as *Cicuta*, *Arsenicum*, *Sulphur* and *Pulsatilla*, but in none are the symptoms so clear and distinct as under *Agaricus*. These are twitching and jerking. This is a feature running all through this remedy. Nystagmus is prominent. No matter how hard the patient may try to fix his gaze upon an object the eyes oscillate from side to side. This oscillation stops only during sleep. In fact, all its jerkings and twitchings stop during sleep.

There is muscular weakness. Irregularity of the motions of the eye, pupils dilate and contract; in fact, there may be spasmodic jerking and twitching constantly except during sleep. These muscular motions may be confused with those of *Causticum*. In the former they are more a matter of irritability as a result of debility, such perhaps as excessive sexual abuse, while in the latter an accompaniment of some form of paralysis from a deep seated constitutional cause. *Causticum* is a deep acting remedy. In *Agaricus* the jerking and twitching subsides during sleep and under *Causticum* it does not.

The muscles of accommodation in *Agaricus* are also affected, which manifests itself in a change of focus distance while reading. One moment the focal distance may be at one point and in another at another point. Deception of color; black motes will appear, or he sees double. All these symptoms are due to this spasmodic action of the muscles.

This spasmodic action we find not only of the eye itself, but also of the lids and muscles of the face about the eye. This condition you will find very often in nervously run down people or in some form of spinal irritation. In short, if the leading condition is borne in mind, namely, the reflex irritation resulting in spasmodic jerking and twitching, the selection of this remedy will be easy.

The concomitant action of the other remedies referred to are so entirely dissimilar to the action of *Agaricus* that differentiation is comparatively easy. *Agaricus* is a purely nervous remedy and its picture is clear.

MATERIA MEDICA NOTES.

PHILIP RICE, M. D.

Belladonna and *Ferrum phosphoricum*. Few remedies in the materia medica have so striking a similarity in their characteristic symptoms as have these two. In many conditions differentiation would be

quite impossible were it not for the pulse. The belladonna pulse is full, firm, even hard, whereas the ferrum phosphoricum pulse with a temperature equally high and other symptoms equally violent will have a comparatively soft and always an easily compressible pulse. This has been verified time and again in acute otitis media, tonsillitis and other acute processes.

Arnica and Symphitum. A comparatively slight blow upon the eye will in some people be followed in a very short time by extensive ecchymosis, extreme soreness and bruised feeling. These will require Arnica. In others a much harder blow will be followed by no ecchymosis whatever, and the pain will be sharp and jagging in character as from a sharp splinter or other foreign body. These will require Symphitum.

Cicuta virosa. This remedy has a profound action upon the nerve supply of both the extrinsic and intrinsic muscles of the eye. Its curative action in strabismus following convulsions, from worms, during and after whooping cough, and from general nervous derangements is well known. But this is not the extent of its good influences. In many and very frequently met with conditions it is equally efficacious. Asthenopia and ciliary spasm, with widely dilated pupils, or alternately contracted dilated pupils, especially when occurring in sensitive and nervous women and children; trembling and twitching of eyelids; eye-strain, with momentary indistinctness of vision, momentary diplopia, inability to maintain a focus, letters and words appear twisted, and objects waver. The linoscope and phorometer will show one-third of a muscular deviation one day and another, and possibly opposite, the next. Unsteadiness characterizes all the eye symptoms of this remedy. These and many other conditions with which we come in frequent contact are very often quickly cured by a few doses of the remedy; especially if found in nervous and sensitive people, with a light complexion, blue or gray eyes, light hair, delicate skin; in other words, those having a sanguine-mental-vital temperament.

JOURNAL CLINIC.

Bismuth gauze, in strips, makes an excellent post-operative nasal packing. It is non-adherent, healing and somewhat antiseptic. When not purchasable it may be made by rubbing bismuth powder or, better, subnitrate of bismuth itself into a half inch gauze bandage. I like to insufflate the bismuth and starch powder alone or before applying the packing.

J. L. M.

Speedy refracting, of course not to the degree of carelessness, should be acquired by the ophthalmologist, just as celerity in operating by the surgeon is a desideratum. When using the trial glasses begin with a strong convex spherical, even to blurred vision, and use weaker and weaker glasses without waiting for the patient to painstakingly decipher the test letters until the most satisfactory glass is found. In myopia of course we use increasingly strong glasses. In astigmatism the "clock-face" of three lines every thirty degrees will afford hints of its axis, degree and variety. Avoid asking the patient for comparisons, ask what he sees; do not substitute his judgment for yours.

An examination lasting two or more hours fatigues the patient's eyes and therefore is less reliable than the above procedure.

J. L. M.

"Do not call yourself an expert until you can **operate with either hand**;" so we were taught by Dr. Liebold, and the writer has found it practicable to acquire this facility, although not naturally ambidextrous nor left-handed.

So one should be able to perform nasal operations with the patient lying upon either side. Of course septal, turbinal, adenoid and tonsillar operations are facilitated by the upright posture, but an operator is scarcely an expert who depends upon this for his sense of direction. This is aside from the matter of drainage.

J. L. M.

For Small Pus Cavities. Formalin and tricresol, equal parts. Inject daily.

Both ether and chloroform anesthesia have a hemolytic effect, which is followed by a compensatory polycythemia. It is followed by 30 per cent. increase in the leucocytes, which begins during anesthesia and lasts for about 24 hours. Leucocytosis is also induced by saline infusions and purgation.—*A. J. of S.*

CURRENT LITERATURE.

DEPARTMENT EDITORS.

WILLIAM MCLEAN, M. D.,
New York City.

FRANK O. NAGLE, M. D.,
Philadelphia.

AMERICAN JOURNAL OF OPHTHALMOLOGY. April '12.

Argyrosis. A. E. Ewing, St. Louis, Mo.

On a Case of Argyrosis of the Conjunctiva and the Staining of the Epithelium From the Application of an Argyrol Solution. Adolph Alt, St. Louis, Mo.

ANNALS OF OPHTHALMOLOGY. April '12.

The Origin of the Melanotic Pigment in the Eye of Vertebrate Embryos, and in Sarcoma of the Choroid. Aurel v. Szily, Freiburg, i. Br. (Trans. Clarence Loeb, St. Louis, Mo.)

A New Hypophysical Syndrome—Hypophysical Nanism. R. Burnier, Paris. (Trans. M. W. Frederick, San Francisco, Cal.)

Circumscribed Orbital Edema From Frontal Sinusitis. Wm. Campbell Posey, Phila.

Shrunk Globe Enveloping an Unusually Large Fragment of Steel. Wm. Campbell Posey, Phila.

A Case of Migraine With Ring Scotoma. Wm. Zentmayer, Phila.

The Postmydriatic Examination. William Martin Richards, N. Y.

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Infectious Suppurative Keratitis. E. La Mothe, Chicago.

The Nervus Vestibularis. William G. Reeder, Chicago.

OPHTHALMOLOGY. April '12.

The Equipment of the Specialist. Editorial article.

Rupture of Descemet's Membrane Due to a Blow From a Blunt Object. Joseph L. McCool, Portland, Ore.

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Cataract Operations in Aniridia Conjuncta. Julius Feger, Budapest.

Light-Hood for Electric Ophthalmoscope. C. W. Le Fever, Phila.

- Operative Treatment of Conical Cornea. Prof. Golovine, Moscow.
(Trans. L. Webster Fox, Phila.)
- Simple Sclerectomy in Glaucoma. J. Bettremieux, Roubai, France.
(Trans. L. Webster Fox, Phila.)
- Iridectomy and Sclerectomy in Glaucoma. J. Bettremieux, Roubai, France. (Trans. L. Webster Fox, Phila.)
- Hemorrhagic Glaucoma—Sclerectomy. M. A. Terson, Paris, France.
(Trans. L. Webster Fox, Phila.)
- Obituary of George Friebis.

OPHTHALMIC RECORD April '12

- A Convenient Attachment for the De Zeng Electric Headlight. John R. Newcomb, Indianapolis, Ind.
- An Ophthalmological Observation of Charles Dickens During His Visit to America. Samuel Horton Brown, Phila.

THE OPHTHALMOSCOPE May '12.

- Sclerocorneal Trephining for Glaucoma Secondary to Cataract, and for Certain Other Conditions. R. H. Elliot, F. R. C. S.
- On the Site of Trephining for Glaucoma; Its Importance. E. Temple Smith, F. R. C. S. E., D. O.
- Clinical Notes on a Case of Glaucoma Covering a Period of Thirty-seven Years. George T. Mould.
- An Operation for Glaucoma (a Preliminary Note). M. Stephen Mayou, F. R. C. S.
- The Reduction of Tension in Chronic Glaucoma. Arthur Zorab.

THE OPHTHALMIC REVIEW. May '12.

- Glaucoma Problems. Priestley Smith.
- Congenital Deficiency of Cilia With Distichiasis. Traquair.

ARCHIVES OF OPHTHALMOLOGY.

- Report of Case of Vessel Formation in the Vitreous. By John Dunn, Richmond, Va.

Mr. W., aged twenty-six, noticed before his right eye a streak to which he gave little thought. The next day the smooth whitewashed walls in his room appeared to be rough and speckled. Vision equal 6/70. Vitreous contained peculiar vascular fibrous masses, also fine dust like opacities. Retinal vessels normal except offshoots from the veins which extended into two highly vascular glistening transparent

fibrous masses within which were great numbers of blood vessels which anastomosed extensively. The fibrous masses proceeded from five stalks or pedicles. An orchitis told of the probable nature of the intraocular changes. Patient put on mercury and iodide of potash. Later two injections of 606 were administered while the patient was under observation. The vitreous has been so full of exudate as to give a dark reflex.

W. McL.

The Skiaskopic Test. R. Granville Waddy.

The Eye Syndrome of Dementia Præcox. H. H. Tyson and L. Pierce Clark, N. Y.

Some Ocular Manifestations of Syphilis and Parasyphilis of the Nervous System. Geo. W. Knapp, Cincinnati.

Tuberculosis of Conjunctiva and Sclera, Following Removal of a Pigmented Papilloma of the Conjunctiva. By Luther C. Peter, Philadelphia, Pa.

Lillian S., aged thirteen, consulted in reference to congenital; the brownish pigmented area in the conjunctiva o. d., two mm. from limbus. Clearly triangular in shape. Pigmented. Moves freely with conjunctival and apparently elevated a little above conjunctival surface. Apparently increasing in size. Removed under cocain anesthesia; two stitches introduced to close conjunctival wound which were left in situ forty-eight hours. One week later wound healed but considerable residual redness and slight thickening of conjunctiva. Two weeks later are of redness increased in size and elevation more pronounced. No pain and mass was salmon color. One large vein led back over globe to inferior cul-de-sac. Pathologist's report of growth was pigmented papilloma. One month later patch increased in size and continued to full size of ulceration. Sections of the second mass were pronounced tuberculous. Careful examination failed to reveal any other foci of the disease. Tuberculin administered followed by a mild reaction which confirmed the laboratory diagnosis. Tuberculin was administered at intervals of three and four days. Improvement of the diseased areas noticeable in ten days and improvement continued as long as patient remained under observation. Special interest centers in the etiology of the secondary growth and possible inoculation from external source at or after the time of operation. The instruments, sutures, dressings, and so forth, were sterilized by heat and the usual aseptic precautions in ophthalmic practice were observed.

W. McL.

A Further Communication on Why Ocular Muscle Tucking or Shortening Operation. G. A. Suffa, Boston, Mass.

Remarks on Some of the Recent Essays Concerning the Pathology of the Lens. Prof. Hers, Wurzburg.

A Successful Method of Corneal Transplantation. W. Lohlim.

ANNALS OF OTOTOLOGY, RHINOLOGY AND LARYNGOLOGY.

March '12.

The Cubical Capacity and Superficial Area of the Sphenoid Sinus. Hanan W. Loeb, St. Louis.

Testing of the Vestibular Apparatus. R. Bárány, Vienna. Trans.. Irving Wilson Voorhees, New York.

The Relief of Pain in Advanced Tuberculosis of the Larynx by Means of Injection of Alcohol Into the Internal Laryngeal Nerve. George Fetterolf, Philadelphia.

The Superior Maxilla—A Discussion of Its Proper Development. E. G. Seibert, Washington.

A Virulent and Rapid Infection of the Middle Ear and Mastoid Followed by an Evanescent Cellulitis of the Neck and Streptococcemia. John Randolph Page, New York.

Vacuum Nasal Headaches With Ocular Symptoms Only. Greenfield Sluder, St. Louis.

Deep Temporal Abscess. Alfred Braun, New York.

Streptococcus Infection and Immunity. L. W. Strong, New York.

Experiments With the Autolytic Solutions in the Treatment of Inoperable Cancer of the Throat, Neck and Face. Joseph C. Beck, Chicago.

Contribution to the Pathology and Treatment of Otosclerosis. Joseph C. Beck, Chicago.

Contributions to the Etiology, Pathology and Treatment of Atrophic Rhinitis. Joseph C. Beck, Chicago.

THE JOURNAL OF LARYNOLOGY, RHINOLOGY AND OTOTOLOGY.

April '12.

The International Collective Investigation of Ozaena. A. Brown Kelly.

Reports for the Years 1910 and 1911 From the Ear and Throat Department of Royal Infirmary, Edinburgh. Part I. Analysis of 123 Operated Cases of Mastoid, Labyrinthine and Intra-Cranial Complications. J. S. Fraser and J. K. Milne Dickie.

The Teaching of Otology and Laryngology in Italy. Ferdinando Massei.

THE JOURNAL OF LARYNOLOGY, RHINOLOGY AND OTOTOLOGY.

May '12.

Case of Thrombosis of the Lateral Sinus, Resection of Internal Jugular, Spontaneous Evacuation of Abscess of Posterior Fossa Through the Foramen Jugulare; Recovery. Perry G. Goldsmith.

Reports for the Years 1910 and 1911 From the Ear and Throat Department of the Royal Infirmary, Edinburgh.

Results of Enucleation of the Faucial Tonsils, Observation on Fifty-Three Unselected Cases. J. H. H. Pearson.

A Consideration of the Results in Fifty-Three Cases of Submucous Resection of the Nasal Septum. J. Burt Hamilton.

Specialist and Specialist Education in Austria-Hungary. Hugo Frev. *Ueber die im Anschluss an perforende Bulbus verletzungen auftretende Staungs papille.* By Privat Dozent Dr. Behr, of the University Eye Clinic in Kiel.

Six cases of choked disc appearing after perforating wounds of the eye—are considered from a clinical and pathological standpoint.

This is more common than the literature would lead one to believe.

Behr begins his article with arguments favoring the mechanical production of this condition and insists on a strict differentiation of choked disc from optic neuritis—the former condition being of mechanical origin—the latter, of toxic inflammatory origin. He then urges ophthalmologists to follow Uhthoff's dictum—a choked disc must have two dioptries of swelling.

In the author's six cases which followed perforating wounds of the bulbus—there was a total absence of inflammatory symptoms in the anterior part of the eye—thus eliminating the possibility of the choked disc resulting from a toxic inflammatory condition—which view is upheld by some former contributors to this topic.

(2) A review of the literature shows that choked disc following chronic, iridocyclitis, suppurative chloriditis and abscess of the vitreous is exceedingly rare.

(3) Microscopic study of his six cases of choked disc reveals not the slightest presence of inflammatory signs in the optic nerve. Edema was the only pathologic change found—this was entirely in front of the lamina cribrosa. Absence of bulging of the lamina cribrosa as found in

choked disc resulting from intracranial pressure was absent in all of Behr's cases.

(4) Hypotonia of the eyeball occurred in all his cases and it is upon this fact that Behr bases his belief of mechanical origin of choked disc following perforating wounds of the eye ball.

The sub-normal tension of the eye interferes with the normal flow of lymph from the vitreous toward the lymph space around the optic nerve—the result being an accumulation of lymph around the optic nerve entrance.

A review of the literature shows that quite a few cases recorded show hypotonia followed perforating wounds of the eye.

He classifies choked disc as follows:

1. As a result of passive congestion:
 - (a) Through compression of the optic nerve and central efferent lymph channels.
 - (b) Tumors, abscess cerebri, hydrocephalus internus, diseased process in the bony canals, aneurysm of the internal carotid and turmschadel.
2. Intraorbital affections, tumors, inflammations, hematoma and hemorrhage into the sheath of the optic nerve.
3. Through retention of the lymph fluid around the papilla with hypertonia of the bulbus after injuries.
 - (b) As a result of active lymph stagnation, from an excess of lymph flow from the vessels in general diseases, as chlorosis, polyzythamie, etc.

BOOK REVIEWS.

OPHTHALMIC MYOLOGY; a Systematic Treatise on the Ocular Muscles.

By G. C. SAVAGE, M. D., Professor of Ophthalmology (Defects of the Eye) in the Medical Department of Vanderbilt University, author of "New Truths in Ophthalmology" and "Ophthalmic Neuro-myology," Ex-President of the Nashville Academy of Medicine, Ex-President of the Tennessee State Medical Association, Ex-President of the Southern Medical Association. Eighty-four illustrative cuts and six plates. *Second Edition*. Published by the *Author*, 137 Eighth Avenue, North Nashville, Tenn. Printed McQuiddy Printing Company, Nashville, Tenn. 1911.

No test of the refractive condition of the eye is complete nor can any prescription for glasses give satisfaction to the patient, save by accident, that does not take into consideration the condition of the ocular muscles. The author of "Ophthalmic Myology" has for many years made a close study of the subject of which he writes, and has embodied his observations and conclusions up to the present time in the second edition of the work just published.

In the first chapter he discusses the fundamental principles of ocular rotation upon which his subsequent deductions are based. In it he very clearly shows, by means of numerous diagrams, contrary to the teachings of Helmholtz, "that the center of the macula is the posterior pole, and that all indirect visual lines cross the visual axis at the center of retinal curvature, which is also the center of rotation." The center of the cornea is the anterior pole in the ideal eye only. This being accepted, the student is advised to forget that the nodal point and the angle gamma were ever invented to torment him, for in the author's scheme of ocular projections they play no part and are discarded into the limbo of things that never were. On pages 32-34 are given in parallel columns the eight fundamental points on which the author is in absolute opposition to the theories of Helmholtz, and in the subsequent pages of the chapter he demonstrates the correctness of his position. In following the successive steps of the proof the reader is somewhat hampered by the necessity of turning backward one or more pages in order to consult the diagrams. This might be obviated in part by printing the explanatory matter in condensed type, but one of the beauties of the book is its large type and well-leaded lines.

In testing for heterophoria the author insists that the monocular phorometer should be used, since by means of it the true image falls on the macula of one eye, while the false image is alone displaced beyond the limit of binocular fusion. By means of it each eye is tested independently of the other, and the power of each muscle separately measured. He also objects to the use of the Maddox rod for testing the recti muscles, for the reason that the streak of light, unless

the error is of high degree, will fall within the field of binocular fusion, and the fusion effort resulting will tend to vitiate the findings.

In discussing the rotation of the eyes in the four primary directions the terms abversion, adversion, supversion and subversion are used in preference to the corresponding terms outward, inward, upward and downward rotation.

That a lenticular astigmatism may neutralize a corneal astigmatism so that during early life there may be but little manifest error, and that this may gradually increase in later life has been the experience of many observers. The author believes that the lenticular astigmatism is the result of the action of Bowman's muscle either in tilting the lens or "that the simultaneous and equal action of two opposite parts of Bowman's muscle, by making tense the corresponding parts of the zonula, could so compress the part of the lens intervening as to increase its refractive power, thus effecting lenticular astigmatism." That Müller's muscle acts only in increasing the refractive power of the lens in all meridians equally is shown in the case of the author himself, in whom a corneal astigmatism of 2.50 D. as demonstrated by the ophthalmometer was not fully made manifest, in spite of repeated tests made under cycloplegics, for eleven years.

It is impossible within the limits permitted to give more than a cursory glance at the many valuable points contained in this latest contribution of Dr. Savage to ocular literature. It is written in a style that holds the reader's attention, and the typography is of such a character as to rob the study, which the book so well merits, of any element of weariness.

BABY'S TEETH TO THE TWELFTH YEAR. By ALBERT WESTLAKE, D. D. S. Mitchell Kennerly, New York and London. 1912.

A brochure couched in conversational form, particularly for the instruction and guidance of the parents of the child in such manner as to produce the best dentures, by early preventive measures and proper diet, etc.

THE TRAGEDY OF CORIOLANUS. Edited by STUART P. SHERMAN, Ph. D., Professor of English in the University of Illinois. New York: The Macmillan Company. 1912.

One of the forty volumes of Shakespeare, each to be edited by some certain American scholar, under the general editorship of Wm. Allan Neilson, Ph. D., of Harvard University, and Ashley H. Thorndike, Ph. D., L. H. D., of Columbia University. Ten were published in 1911 and six are in preparation. It is an excellently printed and bound little pocket edition book, very convenient for travelers' reading, and a most attractive and entertaining little time-killer for a physician's waiting room.

THE HEALTHY BABY. By ROGER H. DENNETT, M. D., Instructor in Diseases of Children, New York Postgraduate Medical School; Assistant Attending Physician, Babies' Wards, N. Y. Postgraduate Hospital; Chief of Clinic, Postgraduate Dispensary for Children; Fellow in the New York Academy of Medicine. Cloth, octavo, 235 pages. \$1.00 net. "All rights reserved." New York: Macmillan Co. 1912.

This beautifully printed and bound handy volume on the care and feeding of infants in sickness and in health reads as easily as one of "the best sellers" novels. Very wisely the author has omitted treatment and description of all but the simplest ailments. But he recommends, for the medicine closet, bichloride tablets and creolin. Now that formalin is so available, efficient and simple it is less irritating and advisable to urge that *no poisons* (other than alcohol) *be kept in the house!* Many a death would be avoided were this rule observed generally.

A strong aqueous dilution of formalin—1 to 1,000—made by putting a teaspoonful in a gallon of water, or 15 drops to the quart, is reliable for disinfection of surgical instruments, linen, etc. (soaking one to four hours). 1 to 3,000 (5 drops to the quart) is less irritating and will disinfect the skin as well as bichloride of mercury or creolin.

We are surprised to find no mention of hydrogen peroxide in this valuable book.

The reviewer disagrees with him in placing veal upon a child's diet; sixty years' experience on the part of the reviewer and his father satisfied them that the danger of severe illness from its ingestion counterbalances all that may be said in its favor.

One of the best things in the book is the emphasis with which the mother is directed to consult her physician if her procedures with a sick child have not shown encouraging results in twelve hours.

Dr. Dennett's instructions as to the care of the eye, ear, nose and throat are good, clear and not too deep. We hope that in the next edition the mother's attention will be called to the bad habit of exposing the child's eyes, when in its carriage, to the glare of a bright sky, even though shielded from the direct rays of the sun.

It would be advisable to dwell more upon the diagnosis of earache in young infants, *e. g.*, to mention evidences of pain on pressing upon or about one ear, and the soothing effect of the application to the affected ear of warmth by a hot water bottle or even the mother's body.

The mother might well be instructed how to fill the ear with oil to drown an insect; this is not mentioned.

We predict a number of editions of this excellent book.

The Journal of Ophthalmology, Otology and Laryngology

Vol. XVIII

Lancaster, Pa., and New York, August, 1912

No. 8

EDITORIAL.

We are going to beg the leniency of our readers for the omission of the usual editorial this month, because the cerebral ennui (or laziness) consequent upon the combination of the debilitating effect of the summer weather and the continued confining work of the recent winter and spring is not conducive to the production of one that will stand muster with those that have gone before.

SYMPOSIUM—AURAL SUPPURATION.

I. O. DENMAN, M. D., CHAIRMAN,

Toledo, O.

THE PATHOLOGY OF AURAL SUPPURATION.

HOWARD P. BELLOWS, M. D.,

Boston, Mass.

THE study of the pathology of aural suppuration resolves itself into a study of the invasion of the ear by pyogenic bacteria and of the tissue changes induced by their presence and activities. At all times and under all circumstances pathogenic bacteria exist, in limited number, in the approaches to the ear, and often abound by reason of abnormal local conditions which especially favor their development. Whether the tympanic cavity itself is normally free from their presence is a mooted question. It is claimed by some authorities that this cavity is not only free from pathogenic bacteria but that if any find a chance entrance they quickly perish under normal conditions. Others, of equal authority, maintain that even the tympanic cavity itself is subject to the presence of such bacteria, in small numbers, at all times but that they lie dormant unless their activities are aroused by abnormal influences. However this may be, the middle ear is no sooner brought into condition to favor the reception and development of bacteria, by reason of local congestion and abnormal exudations, by whatever cause induced, than an abundance of bacterial life springs into immediate evidence, and the subsequent course of the middle ear disease and its attendant pathological changes depends, in chief degree, upon the kind or kinds of bacteria which are present. Bacterial invasions of other portions of the ear than the tympanic cavity and its connecting mastoid cells also stamp the resulting inflammatory processes with peculiarities characteristic of the kind or kinds of bacteria which have affected entrance and developed the range of their activities. This is true in the external and the internal, as well as in the middle ear, and even in the intracranial extensions of aural

disease. In all these localities successive infections may occur which greatly alter the course and outcome of the morbid process—a simple infection by one pathogenic organism being followed by the invasion of several varieties, even, of other organisms into the same area, and these subsequent infections may be far more virulent or protracted than that of the original invader. Sometimes pathogenic bacteria which infest the ear, like the *diplococcus catarrhalis*, may induce only the simpler form of inflammatory disease, the so-called catarrhal inflammation, without the development of purulent exudation, while at other times the pyogenic bacteria, with which we are directly concerned in our present study, give rise to more or less violent suppurative inflammation, with pus formation and with degenerative tissue changes which are sometimes alarming in the rapidity and the extent of their course.

The paths of invasion which are followed by bacteria in their encroachment upon the ear are most obviously the external auditory canals and the Eustachian tubes, but entrance is also effected from the circulatory system through blood vessels and lymphatics, and from the cranial cavity through the internal ear.

The external canals harbor at all times a variety of bacteria, chief among which are the staphylococci, and at times of physical depression, when vitality is deficient, the infection of the canal walls when bruised or scratched or chemically irritated, is not infrequent, with the local formation of an abscess or a furuncle. When a perforation exists in the drumhead, whether old or recent, or when a paracentesis has been performed, the entrance of the bacteria in the external canal to the tympanic cavity is assured. Entirely extraneous bacteria, like gonococci, may also find entrance by this path and exert their influence upon the pathological processes going forward in the middle ear. In cases of fracture of the skull bacteria also find their way, at times, from the external canal to the middle ear by way of the mastoid cells.

The Eustachian tubes afford an entrance to the middle ear which is used far oftener than any other by invading bacteria. It is in the nasopharynx that pathogenic germs are found in greatest abundance and variety, and here they thrive under conditions which are most favorable for their development. Especially is this true when occluding growths exclude the air currents and impede drainage, or when local hypertrophies disturb the venous circulation and promote an excessive secretion of unhealthy mucus in the nasopharynx, the tubes and even in the

tympanic cavity, while the fissured surface of adenoid growths and the crypts of unhealthy tonsils favor the lodgment and growth of countless bacteria. The path from the nasopharynx to the tympanum is easy and direct, especially during infancy and childhood when the tube is shorter and relatively more open than in adult life.

From the lymph and blood vessels bacteria have frequently found their way to the middle ear, especially the influenza bacillus, and from the cranial cavity to the internal ear an easy path follows the course of the auditory nerve, while the meningococcus intracellularis, at least, has been known to enter through the aqueductus cochleæ.

The varieties of pyogenic bacteria which invade the ear are many. Different investigators have recorded more than twenty. Of these, however, most are of such infrequent occurrence, or play roles so little understood, that it would not be profitable to dwell upon them. The staphylococcus seems, on the whole, to be the most prominent in point of frequency of occurrence, and also numerically, but its infection is less virulent and treacherous than that of some of its associates. Its staying power seems to be its leading characteristic, for it is preëminently the bacterium of chronic suppuration. We have seen the role which it plays in otitis externa, and it is often the first kind of infective germ to find entrance to the middle ear, either from the external canal, the nasopharynx, or from both. In the middle ear it maintains preëminence of number in most cases but is usually soon associated with other bacteria, especially streptococci and pneumococci, which influence the subsequent course of the disease through the mixed infection.

The streptococcus seems to occur next in frequency, and its advent is dreaded beyond that of all other bacteria because of the virulence of its infection and the destruction of tissue, especially of osseous tissue, which so often results. It is this streptococcus which predominates in the otitis of scarlet fever, sometimes associated with the bacillus of diphtheria through secondary infection, and also in the worst cases of measles. In mastoid involvement it is the chief offender, also in sinus thrombosis, and in all the intracranial extensions of aural suppuration the streptococcus predominates over all other bacteria.

Next the pneumococcus takes rank and is found associated with the staphylococcus and streptococcus in many suppurative inflammations of severe type. Unassociated it is a frequent cause of otitis in infancy. As *staying power* may be considered the characteristic of the staphylo-

coccus, and *virulence* that of the streptococcus, so *treachery* may be regarded as the leading characteristic of the pneumococcus. Its infection of the tympanum is active but of comparatively short duration, and its subsidence seems permanent, but later renewed activity not infrequently appears in some new area to which the infection has extended itself. This is often the mastoid process. In a case of my own the extension was to the meninges without break in the cranial walls.

The bacillus of diphtheria often appears as a secondary infection of the tympanum, and in association with staphylococci and streptococci. In my experience it is difficult to obtain negative cultures from this cavity after the disease is apparently cured, because so many nearly inaccessible hiding places furnish lodgment to the germs, with an environment which is peculiarly favorable to their cultivation.

The influenza bacillus apparently finds entrance to the middle ear from the blood or lymph currents and, preparing the way, is afterwards joined or succeeded by other bacilli, diplococci, staphylococci or streptococci, which enter from the nasopharynx or the external canal, the mixed infection finally determining the course of the subsequent disease.

Diplococci are also found, in association with streptococci and staphylococci, in cases of cerebral abscess and are regarded as the usual cause of epidural abscess.

The bacillus pyocyaneus, though rarely found, is worthy of passing mention because it is believed to be the cause of perichondritis.

The tubercle bacillus causes both primary and secondary infection of the ear, and is attended by bacteria which cause suppuration, but is not itself a pyogenic organism.

These are the bacteria with which we are chiefly concerned in the treatment of cases of aural suppuration. As a matter of practical import it is chiefly in cases of mastoid involvement that we desire to know the particular kind or kinds with which we are dealing. The question of operative interference is often a perplexing one in the treatment of mastoiditis, and requires for its answer all possible information from every source. The man who operates as soon as he has a reasonable excuse for doing so is spared the hours, and perhaps even days, of responsibility which rests on the shoulders of the man who has so many times succeeded in averting the operation, by local antiphlogistic measures and by internal medication, that he has come to operate, in acute cases, only when the actual safety of the patient de-

mands it. The question for such a man is how long to keep up the fight. In my own experience I have valued and profited by the information which has come from the bacteriologist in these times of responsibility. In the presence of a staphylococcic infection I have felt much safer than when the pneumococcus was present, and have continued my efforts to avert the operation longer and more successfully. In the presence of the streptococcus, however, I have a number of times decided to operate more quickly than I should otherwise have done when judging from either the objective or subjective symptoms present, and have been thankful I did so, as the destruction of bone tissue was already underway and the interior damage out of all proportion to exterior indications.

As regards the tissue changes which are incident to the pyogenic process in different portions of the ear it is not necessary to dwell upon those in the external canal because the abscess or furuncle formation requires no description. In the tympanic cavity also there is nothing obscure. Hyperæmia of the mucous membrane is followed by inflammation, first localized then becoming more or less general, with swelling of the lining membrane, infiltration of the subepithelial layer, exudation of serum and mucus, more or less blood extravasation and the formation and accumulation of pus. Then follows pressure necrosis with consequent rupture of the tympanic membrane and, in the most severe cases, continued tissue destruction involving almost the entire drumhead, with evacuation of the ossicles, carious involvement of the tympanic walls and extension to the mastoid process, internal ear or cerebral cavity.

In the mastoid process hyperæmia of the lining membrane of the cells is followed by swelling and desquamation, venous stasis, exudation, pus formation and erosion of the intercellular bony walls, followed by extensive caries or necrosis.

In the internal ear, when the infection is acute and diffuse, the membranous labyrinth becomes violently congested and opaque, the lining membrane of the osseous labyrinth participates and degenerates, the perilymph and endolymph exhibit blood extravasation and pus formation, the structures within the vestibule are permanently disorganized, and, if free evacuation of pus is not secured, extensive necrosis with imminent danger of intracranial extension results.

An acute circumscribed infection of the internal ear occurs especially where the point of bacterial invasion is into the external semi-

circular canal by pressure erosion through the tympanic wall in the presence of a cholesteatomatous mass, instead of by way of either the oval or round windows into the vestibule. Here the area of inflammation and degeneration is restricted, the cochlea may remain unaffected, the drainage be adequate and the outcome the formation of a local sequestrum, with far less danger of extension and deeper infection than from diffuse inflammation.

In the chronic form of labyrinthine suppuration the bony labyrinth may become slowly involved and considerably eroded, especially toward the tympanum, before the infection reaches the membranous labyrinth, and gives rise to marked functional disturbance—but extensive necrosis, the formation of a sequestrum and the danger of intracranial extension into the posterior fossa is apt to be the ultimate outcome of the degenerative process.

Thus briefly, in accordance with the time at our disposal, we have reviewed the salient points in the pathology of aural suppuration.

220 Clarendon Street.

Syphilis in the Lower Animals.—Hoffman (*Münchener medizinische Wochenschrift*, March 28, 1911) sums up our results as to experimental syphilis as follows: If we inoculate the lower apes subcutaneously, we get, at times, insignificant evidences of secondary syphilis. But if we inoculate the same animals in the scrotum, we obtain, after three months, very characteristic generalized syphilis—papulous, pustulous, etc. Syphilis is found to be a local malady until the spirochetes enter the blood, but this occurs at so early a period that the malady may be termed constitutional from the start. It is an error to believe that rabbits, etc., are more susceptible to syphilis than the higher animals. The peculiar susceptibility of small laboratory animals to corneal and testicular inoculation is misleading in this direction. Nevertheless, corneal studies of inoculation in rabbits, etc., are full of interest. Double inoculation of the anterior chamber “takes” in nearly all cases. In about one-half the cases inoculation of one eye is followed after about two months by syphilis of the opposite eye. The corneal lesion, nominally a keratitis, is actually a syphiloma, but one which may resemble, structurally, a tuberculous neoplasm. However it seems able to imitate almost any type of corneal disease. Thereby it differs wholly from the syphilitic keratitis of human beings, which is not only never a primary lesion, but also falls under a few definite types. The primary inoculated syphiloma of the cornea in animals remain a lesion *sui generis* and as such must be considered in pathology, with no reference to any other lesion whatever.—*Medical Record*, April 22, 1911.

GENERAL THERAPY OF AURAL SUPPURATION.

JAMES A. CAMPBELL, M. D.,

St. Louis, Mo.

THE treatment of aural suppuration will depend entirely upon whether it is acute or chronic, and the nature of its complications.

When it is caused by and accompanies acute catarrhal disease of the nose and throat, or eruptive diseases involving the same, these conditions must be considered and treated as a prime source. In such cases when serous or purulent accumulations collect in the middle ear there is, in most cases, either spontaneous rupture and discharge or such drainage must be secured by incising the membrana tympani. This with reasonable cleanliness, sometimes suction and in suitable cases gentle inflation, will remedy the trouble in a comparatively few days.

In chronic cases the perforation is established, and the discharge varies with the character of the middle ear inflammation and its complications, as well as its aggravations. That so many forms of treatment have been offered is the best proof that no one form can cover all cases. In my opinion the first essential is absolute cleanliness; this is obtained in various ways, syringing, which I do not favor. Peroxide of hydrogen, although condemned by certain authorities, is very useful, and I use it in nearly every case. I have never seen any bad results from its use. I do not believe it can drive secretions back into the mastoid, for gaseous action will always take the direction of least resistance—outward. If the perforation is small, local treatment will not reach the tympanic cavity, hence is of little use except for cleanliness. If the opening in the tympanic membrane is large, many things have been offered and tried.

If granular or polypoid growths present, they must be removed the usual way. For local use I employ most frequently boroglyceride and alcohol in varying proportions; formalin 1 to 500; sometimes solutions of nitrate of silver or permanganate of potash, as well as many other remedies. Insufflations of powdered borax, and boric acid and calendula used more in the past than now. Ossiculectomy not urged as frequently as formerly. The use of yeast preparations has been praised.

Radical mastoid operations for chronic obstinate purulent otitis is much in vogue in certain localities, but in my experience it belongs to the last resort methods. Radiant heat, or that offered with Beck's electric heater, is of excellent service in certain cases.

Dr. E. D. Brooks' report of results from X-ray flash deserves consideration, and additional reports would be of value in this direction. High frequency electricity has helped some cases. Vaccine is the latest offering. I have had very little personal experience with it. Dr. Reiks' exhaustive review shows a conflict of opinion on the value of this procedure; but Dr. Nagel's remarkable report, where thirty-nine out of forty cases were cured by the use of autogenous vaccines, certainly must command our most careful attention and emulation. No other treatment yet offered can compare with this in efficiency.

Dr. C. L. McDonald (*Journal American Medical Assn.*, June 11) reports thirty cases with good results, while D. W. G. Weston and J. A. Colmer, in the same journal, April 15, 1911, treated 308 cases of purulent otitis media following scarlet fever with autogenous vaccine with 21.99 per cent. cures in from one to thirty days as compared with 7.46 per cent. cures under the usual treatment in the same length of time. But the preparation of vaccines is a laboratory process requiring time, care and experience; in fact, Dr. Nagel emphasizes this point as of first importance in securing good results. Removal of patient to more favorable environment, sanitary and climacteric will often be followed by rapid improvement and cure.

Properly selected internal remedies are without doubt helpful, as repeated experience has proved to everyone who has tried them. They are, in fact, indispensable.

In the treatment of aural suppuration the best results are obtained by systematic, frequent and continuous treatment. This is often impossible to obtain in private practice, where the indifference of the patient and frequent imprudence of exposure to colds, and the aggravations following, often unnecessarily prolong the treatment and prevent success. The comparison between results in private and hospital practice will fully bear out the above statement. Referring to the records of the last ten years of my service in the St. Louis Children's Hospital, shows that of 234 cases of purulent otitis media 204, or over 85 per cent., were cured, and of the remaining 30 cases some left the hospital before entirely well, while all of them were improved.

Mermod Jaccard Bldg.

SURGICAL TREATMENT OF MIDDLE EAR SUPPURATION.

BURTON HASELTINE, M. D.,

Chicago, Ill.

THE surgery of middle ear infections begins, of course, with the necessity for paracentesis. The indications for this simple procedure are fairly well defined, but my own experience leads me to resort to it earlier now than formerly. I am convinced that the distinction between serous and mucous or purulent effusions is of little more than academic value. Without doubt we can remove some portion of a serous effusion through the intact drum head by the osmotic action of the glycerides, and I usually employ them as a first effort to obtain relief but in comparatively few cases is permanent relief so obtained.

When we consider the quantity of serum exuded through the incised drum in the ordinary case the futility of trying to dispose of this by osmosis is sufficiently obvious. The neatest and most conservative procedure is certainly to open early with proper aseptic precautions and treat with gentle inflation and simple cleanliness. By this means the pus stage is usually entirely avoided and the entire process shortened to a few days. I depend very little upon the use of germicides of any sort, but maintain cleanliness by simple measures which means chiefly the removal of discharge so frequently as to prevent all possible accumulation.

Middle ear infections so treated rarely develop mastoid or other complications calling for other surgical treatment. I have never yet been called upon to make a mastoid operation where I have had control of the case before indications for operation were already present.

Transillumination is always of interest, but in acute cases is of little practical value, as a dark mastoid by no means indicates necessity for operation.

The radiogram is of no great value in acute mastoiditis, being helpful especially in the chronic form.

INDICATIONS FOR OPERATION.

An important fact to remember is that in every severe otitis media the mastoid is to some extent involved and that pus exists in some of the mastoid cells in nearly all cases of acute suppurative otitis. The symptoms of local pain, tenderness and heat as well as general elevation of temperature are, therefore, commonly present, and without other considerations do not constitute indications for opening the mastoid.

Pus in the cells does not demand operation, but pus without a means of exit or pus retained to the point of tissue destruction does demand it, and this is the delicate point to decide.

Temperature is the question usually first considered, and of all single symptoms it is the most treacherous. I cannot too strongly state my belief that the temperature record is the poorest possible guide in managing any case of sinus empyema. A high and fluctuating temperature is diagnostic of nothing, while some of the most threatening local conditions may exist with a temperature chart practically normal. I have seen a man walk into my office with normal temperature and within three hours have removed two drams of pus from the sigmoid sinus.

What, then, are the conditions that should lead us to operate in an acute case? Briefly these:

(1) Persistent or increasing mastoid pain, tenderness and swelling with sleeplessness and general evidence of sepsis four to six days after free tympanic drainage is established.

(2) Evidence of tissue destruction in the mastoid, such as increase of convexity of the mastoid cortex, œdema of the overlying tissues, or bulging of the posterior superior meatal wall.

(3) Symptoms of any intracranial or labyrinthine complications such as are to be the subject of another paper in this symposium.

I have given these three groups of symptoms in what I believe to be the order of their urgency. The temperature and general state of the patient are always to be considered, the most serious temperature being the increasingly typhoid type.

If blood counts are available they should be made every twenty-four hours with the following general rules in mind:

With decreasing leucocytosis, the polymorphonuclear count, vitality good and septic appearance not increasing, do not operate.

With increasing leucocytosis, vitality good, general sepsis slight,

consider operation, but depend upon local findings. Delay is permissible.

With increasing leucocytosis, vitality good and general sepsis marked, operate and expect prompt relief.

With decreasing leucocytosis, vitality failing, and no lessening of sepsis, operate but with extreme care and a guarded prognosis. The case is serious.

THE OPERATION.

I do not agree with those writers who advocate a variety of operations for acute mastoid infection. I am aware that many cases recover with simple incision or with removal of a portion of the cells.

I know, too, that occasionally a case recovers with no operation whatsoever. But I also know that the only proper result following an operation in acute mastoiditis is prompt recovery without deformity and restoration of function as good as before the attack. These results can be with certainty accomplished only by complete removal of the pneumatic cells and the establishment of free drainage of the infected attic thru the mastoid space.

When once the operation is undertaken we add nothing to its seriousness by making it complete, in no other way can we assure our patient the most rapid and perfect recovery with protection from future trouble immediate or remote. Partial mastoid operations belong in the same category with partial tonsil removal.

Whether the simple mastoid operation should include exposure of the lateral sinus depends, I think, as it does in the radical, upon the extent of the disease. If there are symptoms of thrombus it should always be done. If not, and the overlying bone is found healthy it should, I believe, be undisturbed. More often than otherwise I have found the sinus exposed by necrosis, and have even at times gone entirely around it, leaving the membranous tube lying in the enormous excavation. In this situation some delicacy of manipulation is appropriate but not more than is frequently demanded elsewhere.

I have no new technique to offer in the operation itself, but I wish to mention again my method of treating the wound which I demonstrated to some of the members of this society as long as twelve years ago. When all is said of blood clot, dressings, cigarette drains and other expedients, this method remains the neatest and most certain to prevent unsightly scars.

It consists simply in converting the mastoid space into a closed

cavity with a relatively small opening at the lowest point. For this purpose the periosteum is preserved and reflected carefully in the first step of the operation. Then when the stitches are inserted they are made to include the periosteum with the soft parts. The wound is closed except at the inferior angle where a small opening is left for the insertion of the pack. A slender strip of gauze is inserted through this opening until the mastoid cavity is lightly filled, the distal end being placed well into the aditus and the proximal end emerging into the outer dressing for drainage. A moist dressing is always used, and this gauze pack is changed each day, lessening in amount as the cavity fills by granulation. The incision heals in a few days, and if the dressings are skillfully done the final result is complete absence of depression and a scar often scarcely discernible.

CHRONIC INFECTION.

I will not consume time by a rehearsal of established indications for operation or by description of well known technical procedures.

It is safe to assume that any member of this society knows that operation should be advised in every case of chronic suppurative otitis that does not yield to non-surgical measures. It is also reasonably certain that each one is capable of making a successful operation when indicated.

Under the most favorable conditions such as prevail in private practice with facilities for frequent and thoro treatment the radical operation is in my opinion rarely necessary. If the pathology is limited to the tympanic cavity it is rare indeed to find a case that will not yield to the thoro and frequent use of the attic syringe or douche. I am now using a tiny attic douche operated by compressed air, throwing a continuous spray, and with only a small perforation I can cleanse the tympanic spaces in an exceedingly thoro manner.

If there is extensive pathology in the mastoid space the case is almost certainly surgical, and here the transillumination and the radiogram are of some service. In a very large proportion of cases in private practice, especially in the young, a conservative operation will bring about a cure and often with less immediate trouble and better ultimate result than the radical.

These are cases for most careful individualization, and in few other situations does the average of results depend so much upon the operator's personal skill.

150 Michigan Ave.

REPORT AND DISCUSSION OF A CASE OF LABYRINTH FISTULA.

GEO. W. MACKENZIE, M. D.,

Philadelphia, Pa.

THE case that I am about to report differs in many ways from the one reported by the writer at the meeting of the New York State Homœopathic Medical Society in February, 1911, and subsequently published in this JOURNAL, April last year (p. 136).

Some facts in the history of the case herein reported were difficult to obtain because of the poor memory of the patient; and, being an orphan, there was no one to assist her in recalling these facts.

There were three separate histories taken by three separate observers within a period of two months, for the purpose of ascertaining as complete and perfect a history as possible, the gist of which is given below.

NAME.—Josephine T. D., age seventeen years.

The patient has had ear trouble off and on ever since she was two years old. Between the ages of six and seven she had a discharge from both ears. At that time she had pain in and about the ears, radiating to the head. Patient cannot recall the exact cause of her ear trouble. Discharge ceased at nine years of age. Occasional earache upon catching cold.

Patient first reported to the West Philadelphia General Homœopathic Hospital Dispensary, December 18, 1911, complaining of impairment of hearing and slight pain in both ears, especially the left side,—more pronounced during the past three months. At this visit the left ear was syringed because of impacted cerumen, and a large plug of which was removed by Dr. S. W. Reeves who had the case in charge. The following day she reported to Dr. Reeves at his office, complaining of severe pain in the left ear. At this sitting he lanced a boil in the canal. The patient reported daily to Dr. Reeves for treatment, who, on several occasions opened boils in the canal, in spite of which the pain grew worse and the patient developed dizziness. With the dizziness the pa-

tient had nausea but did not vomit. The boils so narrowed the canal that at no time was Dr. R. able to get a view of the tympanic membrane.

About January 1st the patient developed swelling and tenderness behind the ear. She was admitted to the hospital when a diagnosis of acute mastoiditis was made. After admittance to the hospital a re-examination by Dr. R. showed the canal to be narrowed throughout its whole extent. The discharge was scanty but offensive, and contained some exfoliated epidermis. All anatomical landmarks were obscured. Mastoid process was swollen, red; periosteum less movable than normal. The auricle protruded from the head and was inclined forward.

Functional hearing tests at this time showed marked diminution of hearing to conversational and whispered voice on the left side. Weber was lateralized to the left (affected side). Rinné on the left side was negative, and on the right side positive. Bone conduction was lengthened on the left side, normal on the right.

January 4, 1912, patient was operated by Dr. R. after the Heath modified radical method, and plastic after Panse. The lateral sinus was found to be near (one-quarter of an inch) to the external wall of the osseous canal, which impeded somewhat the progress of the operation.

Patient was discharged from hospital in good shape after the first redressing. She failed to report to her surgeon regularly, oftentimes going nearly a week without change of dressings. As a result the cavity became filled up with exuberant granulations, which Dr. R. found rather difficult to keep down. Discharge from the wound became offensive, suggesting necrotic bone. After two or three weeks the patient developed dizziness with headache. With the dizziness the patient observed that the surrounding objects seemed to move from right to left. The headache became more pronounced and centralized in the forehead.

February 12, 1912, the patient was re-admitted to the same hospital for a second more radical operation which was performed by the writer.

SECOND OPERATION.

The old retro-auricular wound was reopened and curetted of granulations down to the antrum and tympanic cavity. The sinus was found to be bare of bone for an area equal to the size of a dime. A fairly large fistula of the external semicircular canal, about 1 mm. wide and 3 mm. long was detected. Pressure over the fistula with gauze ex-

cited bilateral deviation of the eyes horizontally to the right corresponding to horizontal nystagmus to the left (same side), which sign is a typical manifestation of a fistula of the osseous external semicircular canal with intact and functioning membranous canal, in a narcotized patient. Furthermore, the seventh nerve lay loose in the tympanic cavity, free of its osseous covering. The nerve, however, was intact and not disturbed, other than to move it about gently with a probe, to show it to some fellow physicians and students present at the operation. Numerous dark-colored gritty particles, corresponding to necrotic bone, were removed with more granulations which filled the tympanic cavity. The operation was completed after the Kuester-Bergmann method; curettage of the Eustachian tube, thorough flushing of the wound cavity with sterile water, wound dressings and bandage.

From the second operation the patient made an uneventful recovery, and was discharged about two months later (March 15th) with the following findings: Retro-auricular wound closed, scar smooth and clean.

Otoscopic examination of left ear shows wide opened canal lined and all was dry.



	M.		M.
12.	+	Conv. Voice,	5.
1.5		Whisp. Voice,	.5
6.		Akumeter,	.5
		Watch.	
<hr/>			
		Weber ———> L.	
slight length.		Schwabach.	lengthened.
+		Rinné.	—
<hr/>			
normal		C ₁	shortened.
normal		c ₁	slight, short.
normal		a ₁	shortened.
<hr/>			



Spon. Nystagmus Distinct rotary nys. to L. when looking straight ahead.

Caloric Reaction After syringing the L. ear 2 min. with cold water rot. nys. to R. with vertigo.

AFTER-TURNING NYSTAGMUS.

After 10 turns to L. with head erect, horizontal nys. to R. lasting 10 seconds.

After 10 turns to L. with head inclined forward 90 degrees, rot. nys. to R. lasting 14 seconds.

After 10 turns to R. with head erect, hor. nys. to R. lasting 5 seconds.

After 10 turns to R. with head inclined forward 90 degrees, rot. nys. to L. increased, 17 seconds.

GALVANIC NYSTAGMUS.

R. Ear.

Kathode 6 milliamp. rot. nys. to R.

Anode 5 milliamp. rot. nys. to L. increased.

L. Ear.

Kathode 5 milliamp. rot. nys. to L. increased.

Anode 6 milliamp. rot. nys. to R.

Equilibrium disturbances slight but manifest by the patient's gait forward and backward, with closed eyes.

Three examinations made at intervals of two weeks resulted in the same postoperative findings as above recorded.

DISCUSSION OF THE CASE.

With the time remaining, I will discuss only a few of the many interesting phases of the case. For certain reasons a detailed functional examination had not been made prior to either operation. However, from the history and findings obtained just before the second operation, there was ample evidence of a severe involvement of the middle ear spaces, together with complicating internal ear involvement, which was corroborated at the operation. A superficial ulcerative or necrotic process had destroyed the greater portion of the median wall of the antrum, involving the prominence of the external semicircular canal and the facial canal. The positive reaction of the external semicircular canal to pressure (fistula symptom) told us that the inner ear was *not* destroyed; consequently there was no indication for a labyrinth operation. Subsequent post-operative findings have proven the wisdom of this non-interference with the labyrinth in this case.

The post-operative examination shows a fair degree of hearing; the negative Rinné with lengthened bone conduction and Weber lateralized to the diseased side, indicate a good condition of the cochlea; while the slight shortening of the hearing to small c_4 indicates that it is not quite perfect.

The shortened duration of the horizontal after-turning nystagmus to the two sides and more particularly to the left (affected side), indicates a destructive process in the left external semicircular canal.

The relatively shortened duration of the rotary after-turning nystagmus to the two sides, but without a pronounced disparity existing between them (14 and 17 seconds) indicates a partial but not a total destruction of the labyrinth.

The comparatively normal figures for the galvanic reaction indicate a normal condition of both vestibular nerves and the three cristæ ampullares of both sides.

It is safe to conclude that in this case, following the operation, there was a closure of the membranous external semicircular canal, in the area corresponding to the fistula of the osseous canal, and that further entrance of infection to the inner ear was prevented.

That such was the result is borne out by certain facts: (a) the greatly diminished horizontal after-turning nystagmus to the left; (b) normal galvanic reaction.

Since the rotary nystagmus produced by galvanism results from the stimulation of all three cristæ ampullares and the nerve, it follows that if one crista be destroyed, there must result a corresponding diminution of reactivity to galvanism. Since there was no such diminution on the affected side, we must accept it as the best possible evidence that the crista ampullaris of the external semicircular canal of the left side was normal and capable of irritation by galvanism but impossible of irritation by endolymph motion, produced by turning, because of the shutting off of the membranous tube at the site of the fistula.

1831 Chestnut Street.

The Suprarenal Capsules in Erysipelas.—Lesne, Gerard, and Francon cite the histories of seven cases of erysipelas to show that suprarenal insufficiency is present with fatal results in some cases. A resume of these cases shows that this condition of insufficiency is present after convalescence has been established. The general condition becomes worse, with manifest asthenia and lowered arterial tension, and death rapidly ensues. The cardiac dullness is found to be increased; the liver is increased in volume; there may be vomiting or diarrhea, and pronounced dyspnea. The condition is analogous to what occurs in severe cases of diphtheria. The hypotension is due to suprarenal insufficiency, the tone of the blood vessels being no longer maintained. The end occurs with cardiac collapse. At autopsy the following changes are found in the suprarenal capsules: these are infiltration with uninuclear leucocytes; microscopic hemorrhages in the reticulum of the gland, with a dissociation of the cellular masses; there is an almost complete destruction of the medullary layer with cellular pycnosis.—*La Presse Medicale*.

INTRACRANIAL COMPLICATIONS OF OTIC ORIGIN.

C. C. COLLIER, M. D.,

Chicago, Ill.

THIS is an old topic, and so much has been written and said upon the subject in the past thirty years that I see little new that I can give, and can only collate the views of others hoping that here and there I may bring out a point that has been forgotten, or has not been heard of. The magnitude of the subject is so great that I will not attempt to take in the pathology of extension, or the surgery, so will limit myself to the symptoms which arise and the method of invasion. Infection takes place in the following manner: Erosion of the bone, anatomical defects, operative procedure; or by the lymph canals, sheaths of vessels, nerves, blood current from the tympanic cavity, antrum or mastoid cells, and may be carried to the middle or posterior fossa, or the sinus. There is still another route after suppuration has invaded the labyrinth, and that is through the ductus endolymphaticus which empties in a pouch between the two layers of the dura, and through the aqueductus vestibuli directly into the subarachnoid space. The symptoms and course vary greatly according to the method of invasion and virulence of the organism.

The endocranial complications resulting from acute otitis are very likely to be rapid owing to the fact that the infection has entered the cranium through the blood vessels or sheath of the lymphatics or blood stream, and not by disease of the bones as in the chronic cases; so we are more likely to have such conditions as sinus thrombosis, acute leptomeningitis, extradural abscess, temporosphenoidal, or cerebellar abscess, arising from the acute condition, and these may come on within a few hours or days from beginning of the acute otitis as the following case will show: I was called in consultation to see a young man, age 26. Health good except for a sore throat a few days before, until fifty-six hours previous when he was taken with a violent earache. The family doctor was called the following morning, and found the patient suffering intense pain. He lanced the drum, and by night pus was pouring out of the ear. The pain continued. The patient became very restless, and I was called about fifty-six hours after the earache started. I found the patient very restless, eyes glassy, pupils dilated, pulse 120, temperature 104° ; some pain over the mastoid but more:

along the course of the jugular; hurt him to turn the head; no swelling; ear full of yellow pus; transillumination negative; eyes negative. I made a diagnosis of mastoiditis with sinus thrombus. Simple mastoid operation was done at 4 P. M., on the same day. No pus was found in the antrum and there were few if any mastoid cells, and the sinus was soon uncovered. Here I found a small perisinus abscess. The sinus was uncovered all the way and was found to look unhealthy. A diagnostic puncture was made, and the blood was found not to be of normal color. I did not open the sinus at this time but waited twenty-four hours to see if there would be improvement. There was none, so the next day I packed off the sinus, opened it and found it to contain bloody watery pus. I then ligated off the jugular just above the clavicle, opened it up, and found it to contain septic clots of blood. A general pyemia developed with multiple abscesses all over the body. The neck and mastoid wound healed readily, and the patient made a good recovery after a hard fight. I report this case to show how rapid and extensive an involvement may follow an acute purulent otitis.

On the other hand, if the condition arises from a chronic purulent otitis the infection is slower and milder, due to necrosis and erosion of the inner plate, so with this we will have very likely symptoms of a local involvement of the dura, with production of an extradural abscess. Now if this condition continues for a time, a fibrinous exudate is thrown out on the internal surface of the dura, which causes it to adhere to the subjacent arachnoid and pia mater, thus preventing a diffuse leptomeningitis, as happens in acute cases from rapid invasion.

This barrier of nature may prevent further extension into the brain, yet erosion may go on till the cortex may become necrosed, leading to the formation of intradural abscess and by still farther extension penetrate the deeper parts forming a cerebral or cerebella abscess. Yet this is not always the case, for a deep seated abscess may form without this progressive stage, involving the different membrane and cortical substance. This may be due to the thrombosis of the small veins running in from the surface. It is in just such a manner that thrombosis of the lateral sinus takes place without first having a perisinus abscess.

So we see that in a general way endocranial involvement of acute otitis is likely to be rapid, diffuse and accompanied by violent systemic disturbances, while in the chronic form they are likely to be slow, distinctly localized, with slight systemic disturbances, especially in the

early stage of involvement. In taking up the special intracranial conditions I will place them in the order of their occurrence, and as the first, I will take inflammation of the sinuses of the dura. These are: (1) Thrombophlebitis of the sigmoid sinus, and of the jugular bulb. (2) Thrombophlebitis of the superior and inferior petrosal, and of the cavernous sinus. Of the sinuses running along the temporal bone, the sigmoid passing on the internal surface of the mastoid process is the most frequently attacked by purulent inflammations. Those less often affected are the superior and inferior petrosal, jugular bulb, and still less the cavernous, also the venæ diploæ.

The symptoms of sinus affections vary greatly, according to whether we are dealing with a sinus thrombosis which is associated with septicemia or pyemia, or an uncomplicated sinus phlebitis. From the latter we may have a case running a course without any symptoms to well mark the condition, but in the greater number of cases there arise such symptoms as vomiting, headache and mild cerebral and meningeal irritation.

I saw a case not long ago where three very good men in general medicine were thrown off their diagnosis by the skin symptoms, instead of being assisted. In this case I not only found complete destruction of the sinus, but also spheno-temporal lobe abscess, hemorrhages, delirium, vomiting, dilated pupils, partial or complete coma, and involuntary passages of urine and bowel movements. Along with foregoing symptoms comes a stiffness of the muscles of the neck, head feels dull and heavy, there may be an edematous swelling over the mastoid or in the region of the emissary veins entering the sinus, which may spread to the temporal region and to the eyelids.

If the thrombosis has formed and extended to the jugular there will appear a tough band on the side of the neck in the course of the vein, which is very hard on pressure.

If the thrombus extends to the bulb and the swelling exerts pressure on the hypoglossal, vagus, glosso-pharyngeal and spinal accessory nerves which pass through the foramina jugularæ, you get cough, hoarseness, and a vagus pulse. You will find some cases which will assume a typhoid character, and again a class in which symptoms of meningitis are present early in connection with the signs of infective thrombosis. Rigors are unusual in the early stage, and the temperature is persistently high, pulse full, bounding and rapid, tonic and clonic spasm of groups of muscles, optic neuritis. In fact, the symptoms of

meningitis may entirely mask the involvement of the sinus until metastasis appears.

There are a certain number of cases in which an early diagnosis is very difficult, if not almost impossible. In these cases a blood analysis will be of great service. If a blood culture shows the presence of streptococci and there is no other evidence of, or cause for the streptococcemia, an infected thrombosis may be suspected; or, too, a high or low leukocytosis with a high polymorphonuclear percentage, taken together with other symptoms, might lead to a diagnosis.

The thrombosis and infection of other sinuses are extensions from the sigmoid. Infection and thrombosis of the cavernous occurring from suppurative otitis is secondary to that of the superior and inferior petrosal. Thrombosis of the sinus is likely to cause epistaxis, engorgement of the orbital vessels with the formation of orbital abscess, constant exophthalmos, disturbances of vision, paralysis of the muscles of the eye, edema of the lids and trigeminal neuralgia.

Thrombosis of the cavernous sinus is likely to be followed by an infection and thrombosis of its fellow, which will give the same symptoms on the opposite side.

Inflammation of the meninges may be classified as follows: (1) Extradural abscess. (2) Intradural abscess. (3) Leptomeningitis and serous meningitis. "Localized pachymeningitis or intradural abscess" is one of the most common infections involving intracranial lesion as the result of purulent otitis. As a rule the position of the dura, contiguous to the tegmen antri or tegmen atticci is the site of the diseased area, although the necrotic process may approach the dura from other portions of the petrous or mastoid portion of the temporal bone, and even the cerebellar dura may become infected. A small external involvement of the dura in otitis cases may remain unrecognized, such symptoms as headache, slight rise of temperature, malaise being attributed to the involvement of the middle ear.

As a rule, a diagnosis is hard to make until complete exposure of the dura by removal of the diseased bone. Therefore, your diagnosis is based upon your findings during a mastoid operation.

INTRADURAL ABSCESS.—When the inflammation spreads through the dura to its inner visceral side there is presented the condition known as pachymeningitis interna. An involvement of the external surface of the dura may go on till finally an adhesive inflammatory process occurring in some cases between the dura and arachnoid, and in the

meshes of these adhesions multiple abscesses form. Pachymeningitis interna or externa may exist for a considerable time without producing serious symptoms. Such accumulations of pus must find exit in some directions, so break into some neighboring structure, and it is quite common for these to empty themselves into the middle ear spaces. A perisinus abscess can become evacuated by draining into the middle ear, by perforating the mastoid cortex, or by spreading along the emissary mastoid veins, and thus reach the skull surface. These modes of evacuation are rare, and more frequently after a lapse of time, the abscesses infect the contents of the cranium, producing brain abscess or a diffuse meningitis.

The third of the series, leptomeningitis. The invasion of the meninges is by the same route as that of the sinuses, namely, by way of the veins or lymph, or traverses the lymph spaces which surround the nerves and arteries, and establishes direct communication between the middle ear and subarachnoid lymph spaces.

According to Boerminghaus meningitis is classified as follows: Meningitis serosa maligna, meningitis purulenta and meningitis serosa benigna. Others classify as diffuse leptomeningitis and serous meningitis. We should bear in mind that symptoms of intracranial inflammation are mechanical and toxic. Any meningeal inflammation has three characteristic symptoms. (1) Headache, which is persistent and severe. (2) Projectile vomiting, which is without nausea. (3) Constipation with abdominal pains, which purgatives do not relieve. These symptoms are due most to an alteration of adjustment of intracranial tension, tho the absorption of toxins plays a goodly part.

Ballance classifies the symptoms as follows:

- (1) Psychic symptoms: Irritability, change of disposition.
- (2) Motor symptoms: Convulsions, Kernig's sign, exaggeration of reflexes.
- (3) Sensory symptoms: Photophobia, hyperesthesia.
- (4) Lymphatic vasomotor disturbance, tache cérébrale.
- (5) Finally symptoms due to exhaustion and death of nerve cells, paralysis, anesthesia, coma.

Fever, anorexia and emaciation, the other accompanying symptoms are due to general infection rather than to meningeal involvement, and may be severe or mild according to the virulence of the infection.

If you have with a case of purulent otitis, mastoiditis, acute or chronic, before or after operation, the occurrence of severe and per-

sistent headache, repeated vomiting, without nausea, fever going higher each day, bounding pulse, together with one or all of the detailed symptoms of cortical irritation you can be positive of meningitis, and the only problem is to determine what form it is: whether it is meningitis serosa maligna, serosa benigna or purulenta. Much light has been thrown on this subject by the examination of the cerebro-spinal fluid. Of the above mentioned forms, meningitis purulenta is by far the most common. The two other forms are less well known. The diagnosis of diffuse leptomeningitis in typical cases where there are persistent headache, rise of temperature, full bounding pulse, followed by photophobia, rigidity of the neck, delirium, choked disc, and finally unconsciousness is not difficult. On the other hand, in atypical cases it becomes necessary to do a lumbar puncture and examine the cerebro-spinal fluid. The symptoms of pachymeningitis interna are quite similar, but less profound. Leptomeningitis, when complicating purulent labyrinthitis, presents a series of complicating symptoms referable to the labyrinthine involvement, therefore the diagnosis is far more difficult.

In doubtful cases lumbar puncture offers us our best aid in clearing up the diagnosis. Although there are many conflicting opinions as to its diagnostic value, one thing is sure and that is if the spinal fluid as drawn from the spinal canal is cloudy and contains polynuclear leucocytes, or is found to have a tendency to coagulate, you have definite evidence that the patient is suffering from an inflammation of the meninges. Spinal fluid which is normal is as clear as spring water, contains few if any leucocytes, and when the latter are present they are of the mononuclear variety and not of the polynuclear variety, and lastly, the normal fluid does not coagulate.

Brain abscesses of otitic origin are divided into (a) abscess of the temporal lobe, (b) abscess of the cerebellum, (c) metastatic abscesses, (d) diffuse encephalitis. A brain abscess develops either from continuity or by immediate extension of suppuration to the cerebral substance or without any demonstrable macroscopic connections with the seat of infection. A careful inspection of the latter condition, however, shows often a purulent infiltration of the apparently non-infected bone, and an inflammatory condition of the dura and parts of the brain bordering on the osseous tissue.

In cases in which every trace of diseased bone is lacking, the spread of inflammation to the brain may be caused either by phlebitis and formation of thrombi in the veins entering the cranial cavity from the

ear, or by the migration of bacteria along the sheaths of the connective tissue bands which accompany the anastomotic blood and lymph vessels of the middle ear and cranial cavity.

The symptoms arising from localized collections of pus within the cranium, like those from meningeal inflammation, are best appreciated when considered from the points of view of (a) the systemic disturbance due to toxemia; (b) the mechanical disturbances resulting from increased intracranial tension, and (c) those resulting from pressure on or destruction of definite areas of the brain.

Unless a brain abscess has actually destroyed important areas or is large enough to interfere with their function by compression, the location can only be conjectured from attending circumstances. It must be borne in mind that even a large abscess may lie in certain parts without giving rise to pressure symptoms, owing to the fact that the space for the pus has been made by actual destruction of brain tissue. The abscess formed by the disintegrated brain substance occupies the same space and therefore gives no evidence of its presence by pressure symptoms. Such accumulations have often become encapsulated and remained for years without sufficient symptoms to bring them to the attention of a surgeon. So-called latent abscess, however, is latent only in the sense that no violent symptoms are present, and careful examinations of pulse, temperature, ocular fundi, the functional power of groups of muscles, reflexes, static equilibrium, etc., would have brought to light sufficient evidence, in many of these cases for a diagnosis.

Remembering that brain abscess is a disease of an organ of most complex functions, that it is secondary to many serious conditions which themselves present a variety of symptoms which might be due either to the primary disease, or some other complication, that wide variations in the virulence of the invasion are possible, it is easy to understand that the clinical picture will be a variable one.

Ballance adopts the five types of clinical evolution described by Brissaud and Soques.

1. A subacute evolution in which three stages are evident: (a) the initial stage of septic infection characterized by headache, vomiting and fever, lasting four or five days; (b) the second stage of remission in which there is a sudden or gradual abatement of the active symptoms; this period of calm may run over a very long course; (c) the third, or paralytic stage, comes on suddenly with or without a convulsion. Coma and death may ensue in a few hours, from rupture

of the abscess, or there may be recovery from the apoplectic seizure followed by symptoms of rapid extension.

2. The evolution with severe general infection which is rapidly fatal. High fever with acute delirium are prominent symptoms marking the more characteristic symptoms of brain abscess. This is usually mistaken for a malignant form of some specific fever unless other conditions have previously pointed to possible brain abscess.

3. Evolution with complete latency until the final attack of coma. In this variety sudden death occurs without previous suspicion of brain abscess until revealed at the autopsy. It is in this "latent stage" that the suggestion was made that some symptoms might have been found if carefully sought after.

4. In the fourth type the evolution is just like that of a brain tumor. Abscess produced by infection of low virulence and symptoms are similar to a tumor of the same size in the same region.

5. The fifth type of evolution is the remittent type. "Here the clinical evolution is in two acts, separated by an antr'acte of greater or less duration. The first act is marked sometimes by an attack of mania sometimes by acute delirium. Then all quiets down and the patient seems cured. But after a few weeks, a few months, or even a year, follows the second act, which is commonly quickly fatal."

It is perfectly evident that the array of symptoms of suppuration, local headache, tenderness on percussion, local increase in temperature, etc., while they have some bearing on the location of the abscess, are not characteristic of any particular type of collection of pus. One cannot say whether it is extradural, intradural, or in the brain substance. So, too, the symptoms of pressure, headache, dizziness, vomiting, loss of memory, delirium, slow pulse, optic neuritis, change in size of pupils, apathy, somnolence, etc., while indicative of intracranial lesion, are not characteristic of any particular type of location. Localizing symptoms when present are frequently most definite in pointing out the position of an abscess. Lack of time will prevent more than a brief allusion to some of the more important of these.

Ballance calls attention to the following facts:

1. The cortical center for hearing may be in part or wholly involved causing tinnitus, hypercusia, or absolute deafness of the opposite (healthy) ear.

2. The cortical centers for taste and smell may be affected. Alteration or suppression of the sense of smell may occur in abscess involving the anterior extremity of the temporosphenoidal lobe.

3. Sensory aphasia often occurs in abscess of the left temporo-sphenoidal lobe in consequence of the cortical centers for the mechanism of speech being on the left side of the brain. The auditory word center and the visual word centers are the ones involved in temporo-sphenoidal abscess. A temporo-sphenoidal abscess on the left side is therefore more easy to recognize than on the right.

4. Paralysis of the "naming center." Certain clinical and pathologic observations point to the conclusion that the nervous mechanism by which the ideas of objects are correlated with their names is located in the left temporo-sphenoidal lobe.

Few of the early symptoms of cerebellar abscess recorded by various writers can be considered as pathognomonic of that condition alone, since they are so frequently found in other intracranial lesions. In later stages when the abscess is large, or meningitis of the cerebellar fossa has developed, pressure symptoms appear which point toward that region. Yawning, slow opening and shutting of the mouth and rigidity of the masseters have been frequently observed. Optic neuritis, while not characteristic, may come on early and be very marked. Pressure on the medulla at a low level produces a brachio-cervical paralysis on the same side. If pressure were exerted on the pons on the same side as the abscess, a crossed paralysis would result; pressure on both sides of medulla and pons would produce a bilateral paralysis.

A number of cases have been recorded in which pressure on the medullary respiratory center has been so marked that respiration ceased while the heart continued to beat. Evacuation of the abscess in such a case might be followed by restoration of the function of respiration and recovery.

Two symptoms which may appear early are of great significance, viz., rotatory nystagmus and cerebellar ataxia. The disturbances of equilibrium may not be differentiated from those arising from suppurative labyrinthitis, but Neuman has pointed out that there is a marked distinction in the nystagmus from progressive labyrinthitis, it grows weaker as the disease progresses and finally disappears, while that from a cerebellar lesion increases as the disease progresses and reaches a degree never attained in labyrinthitis.

In addition to this, a point of great value appears from the fact that in a case in which at first the nystagmus was more pronounced when the eyes were turned toward the well side, if the phenomenon later were suddenly reversed a diagnosis of cerebellar lesion could be made with certainty and labyrinthine cause excluded.

Erosion of the lateral carotid artery due to otitic suppuration is a rare condition, yet quite a few cases have been collected in medical literature from which some points may be gleaned.

Several of these cases were accompanied by circumscribed pachymeningitis basilar and cortical meningitis and brain abscess. Erosion of the artery is no doubt caused by the inflammatory softening of the artery wall which is surrounded by pus and ichor, and in such cases the power of resistance is so diminished that it ruptures. Again an anatomical variation may be the cause. The duration of aural suppuration till advent of hemorrhage varies and may be from a few months to several years. As a rule, the flow of blood from the ear is profuse, but not always, however, of a pulsating character. The blood is bright red, seldom mixed with pus. Sometimes the blood escapes through the Eustachian tube into the pharynx. The diagnosis is made by the bright red color of arterial blood and by cessation of the hemorrhage on compression of the carotid artery. There can be no doubt that the blood comes from the carotid when it spurts from the ear in gushes and synchronous with each systole of the heart. If the hemorrhage is not severe, the fact should not be lost sight of that it might come from erosion of the middle meningeal artery which passes through the foramen spinosum close to the canalis carotids. Bleeding from the lateral sinus may be distinguished from the bleeding of the carotid, by the fact that the blood is much darker and continues to flow after compression of the carotid artery. I cannot find a case of erosion of the carotid artery recorded which ever recovered.

100 State Street.

SYMPOSIUM—AURAL SUPPURATION—DISCUSSION.

G. A. SHEPARD: We have all seen cases of acute otitis which, upon opening the membrane, showed a profuse serous discharge, and then in a few hours have seen it change to a purulent discharge. I felt that in those cases the operation was a source of infection. This suspicion has led me to greater care in cleansing the canal before the operation. Cleanliness—intelligent cleanliness—is extremely important in treating chronic suppuration of the middle ear. Give no chance for infection to take place. Chronic suppuration has been looked upon for some years as always calling for the radical mastoid operation but now we find that many cases may be cured without it, cases due to localized processes easily removed by curettement, such as attic inflammation or necrosis of the floor of the tympanum. Eight years ago a boy of seventeen came to me with a history of suppuration in both ears for ten years with profuse discharge and polypi. I performed a radical

upon the left side and found the mastoid cavity perfectly healthy but the whole floor of the tympanum was necrotic. On the other side the floor simply was curetted. My first operation was unnecessarily radical. We should be careful to examine the attic in cases of chronic suppuration and see that it is not the source of the trouble before resorting to the radical operation. In order to avoid deformity I save as much as possible of the mastoid process. Of course, the cells must be eradicated, but if the tip is solid I always leave it there to give form to that part of the neck.

J. IVIMEY DOWLING: There is one important point that I feel impelled to speak upon at this time because it is valuable in all such cases. Many cases of aural suppuration have some one or more of the nasal accessory sinuses of the same side infected; there may be empyema of the frontal sinus, of the maxillary sinus or of the ethmoid cells. In one instance, operation on the frontal and maxillary sinuses relieved the patient of the necessity of having a mastoid operation. The results are very satisfactory when the sinuses are looked after. Trephining the sinuses has afforded relief to epileptic seizures in several cases. A patient with epilepsy was referred to me for mastoid operation; after careful investigation I became convinced that the real and chief seat of the trouble was in the sinuses. I cleaned out the sinuses with most pleasing effect. It was nearly two years ago, the epileptic attacks have been much less frequent since.

Another point to be remembered is the fact brought out by Dr. Bellows, that the streptococcus infection is a virulent form. About seven years ago a case came under my observation in a woman who had streptococcus infection in the mastoid who came to me for radical operation. There was a possibility of her being pregnant and after consultation I decided to postpone operation. She was delivered and apparently recovered without ear operation. She had another child subsequently. Five years later she came to my office complaining of her ear and I found labyrinthine inflammation. I insisted upon radical operation. It was performed with relief of all her symptoms. Now, if I had performed the operation in the first place it would have done away with the dangers of labyrinthine disease to which she had been exposed.

Another point in treatment is the advantage of packing the external canal with a wick of gauze, the end to be placed upon the point of perforation. The wick must be long so that you get the draining force of syphon action. Over that a moist dressing is applied, and over that I use rubber tissue which retains the moisture twenty-four hours. This treatment will relieve many cases of chronic suppuration.

Another thing, the ethmoids should not be forgotten nor neglected. It is most easily treated by tamponading the nose with argyrol solution. A chronic aural suppuration may be relieved by that simple measure very speedily in conjunction with simple cleansing of the tympanic cavity.

W. H. PHILLIPS: In acute mastoiditis as in other acute inflammations in my experience a single blood count, made as inexactly as they usually are, is of little value. Increase in the leucocytes at single count or for two successive counts is of little value. If followed up for three or four counts or more it may aid considerably in diagnosis and prognosis, but usually long before this can be done the clinical signs have settled the diagnosis and determined the treatment beyond any doubt. Hence I feel that the blood count is of little value.

In regard to drainage I formerly followed Dr. Haseltine's method of placing a small gauze drain at the inferior angle of the wound, but I have later found the use of a fenestrated rubber tube, after Heath, superior to the gauze drain; it is more easily removable and granulations do not grow into it as they do into the meshes of the gauze.

Chronic suppuration is not considered to indicate the radical operation so pointedly as in former years. During the past two years I have done the radical operation in only two cases. I think that as time goes by we will get further away from the radical operation except in a few cases. The presence of chronic mastoiditis with large cholesteatoma is one of the undoubted indications for the radical operation, but the large majority of cases of chronic suppuration, even involving the ossicles and antrum without much cholesteatoma, can be relieved by various modes of treatment without employing the radical mastoid operation.

As to diagnosis, I have never used Mosher's method of transillumination, although I thought well of it at the time of its introduction. The radiogram I have used on several occasions with satisfaction. In three acute cases, although it is more difficult to apply in acute cases, it made the diagnosis absolutely certain and would have done so without the clinical symptoms. In chronic suppuration I have this winter and spring had radiograms made of six cases who had been advised to have a radical done. The radiogram in none of them showed a cholesteatoma cavity, and all but one, which is still under treatment, made a perfect recovery under the use of autogenous vaccines.

C. L. RUMSEY: When you speak of vaccine treatment do you always refer to the autogenous vaccines?

W. H. PHILLIPS: Always.

A. WORRALL PALMER: In regard to the pathology of aural suppuration I think Dr. Bellows omitted to mention infection of the ear from the sphenoidal sinus, which does occasionally occur. I would like to hear from our members of their experience with a case of this character.

In washing out the sphenoidal sinus I have noticed that a little extra pressure would, not infrequently, cause discomfort in the mastoid region; undoubtedly infection may travel through these porous bones. Some members here will probably remember about five years ago that Dr. Lloyd, of Brooklyn, read a paper bearing upon this subject, and

exhibited to us some casts of the diploe of the skull demonstrating that there was connection all the way from the frontal sinus back to the sphenoid and still farther through the diploic cavities of the bone to the mastoid.

C. A. HARKNESS: In the treatment of suppurating ears, I have had excellent success—even extraordinary success—from the use of enzymol; my method of using it is to cleanse the ear thoroughly with a douch of mild alkaline solution, then treat the canal with the enzymol and pack the ear leaving a narrow drain of gauze. In twenty-four hours open it, cleanse and repack; all odor disappears in three days and the discharge stops shortly afterwards. I do not know how it accomplishes the result but I know that it does do it. Enzymol is a digestive product, and has cured cases that I had been treating by usual methods for a long time without result. In one case, a boy of fifteen with discharge from the ears, it succeeded after all kinds of unavailing treatment. He had his tonsils removed and a great deal of other operative work done without relief. Two days of enzymol stopped the odor, and in a month's time it was cured without return in eighteen months. Case was of nine years' standing.

G. W. MACKENZIE: I would like to speak a word of appreciation for Dr. Bellows' excellent paper. I do not remember that he spoke in his paper of the streptococcus mucosa, one of the differentiated varieties of the streptococcus. It is not infrequently the source of suppuration of the ear and occasionally of the accessory sinuses of the nose. The infection from this organism is peculiar in that, though just as violent, it progresses without warning. I saw such an infection in Vienna; the patient began with the symptoms of an ordinary cold, with associated tonsillitis, discharge from the nose, and in five days afterward, deafness and meningeal irritation. On the seventh day the patient was brought to the hospital in a comatose condition. The membrane was normal on one side, on the other side intact but slightly dull and there was one little bleb present. Puncture was made and the discharge was found to contain the streptococcus mucosus. Death followed before a mastoid operation could be performed. A post-mortem was had, and on opening the skull there were three or four tablespoonfuls of a purulent mucoid fluid. This streptococcus has been reported together with a group of other infections by Ruttin, in a paper published about 1908. In a tabulated list of acute infections of the ear it ran quite high, and its virulency was also quite marked. Possibly this streptococcus plays a more important role in our cases of aural suppuration than is generally supposed. I had a similar case as the above without such a disastrous result. With this form of infection we may have an intact membrane. I appreciate the distinction that Dr. Bellows made between streptococcus and staphylococcus infections, the one (streptococcus) being virulent, and the other (staphylococcus) distinguished for its extreme tenacity, but yielding usually

to the vaccine treatment. The pyocyaneus infection almost invariably spreads from one part to another. In affections of the labyrinth resulting from empyema of the sacculus endolymphaticus the inflammation must find its way between the two layers of the dura which I doubt very much because of the density and resistency of the dura. The infection is likely to occur through the nasal cavities and the sinuses.

Referring to Dr. Collier's able paper. In cases of central deafness I have not found that the opposite ear only is involved. I differ from Dr. Collier on that point. The deafness resulting from central (cortical) lesions is bilateral. The deafness, however, is more pronounced upon the opposite than the same side for the anatomical reason that at the stria acustica the decussation is not total. In other words, sensory fibres from the acoustic apparatus in the ear go to the cortex of both sides in the ratio of about one fiber to cortex of the same side to two fibers to opposite side. In lesions of the nerve on the lower level the deafness will be on the same side as the lesion. I did not report my case in the paper because it was a matter of uncertainty whether it was a case of middle ear suppuration with mastoiditis or a recurrence of an old suppuration. I am inclined to think the former.

In a case that reported to the hospital the physician in charge found impacted cerumen, it was cleaned out and was followed by middle ear suppuration. Probably the water got in through a dry perforation. In such cases the most absolutely sterile water used in the ear is liable to be followed with suppuration.

I. O. DENMAN: Has any one here had experience with the tubal operation? It is recommended when infection takes place through the tubes and the object is to destroy the lumen of the tubes of the bony canal and to render it impervious. Such a theory seems feasible to me; has any one here tried it?

H. S. WEAVER: I have tried it in a few cases where the progress of the case seemed to be very slow. After the attic had been cleansed under antiseptic precautions I have injected Beck's bismuth paste with the most satisfactory results, lessening the time of cure by at least one-half. I had heard that it worked well in tubercular sinuses, and it occurred to me that it might be of benefit in the wound after mastoid operation. I tried it and it worked admirably.

W. H. PHILLIPS: How do you apply it?

H. S. WEAVER: Simply heat it and fill up the cavity.

I. O. DENMAN: I want to thank the contributors whose papers have made this symposium a success.

I would like to say that early paracentesis is a most admirable procedure. With the incision properly placed no bad results can follow and there are many things to be gained by it. When you consider that it is practically a closed cavity stuffed full of pus laden with germs, it is obvious that the scientific and sensible thing to do is to evacuate it and to do it early. I have never found any difficulty in obtaining the

consent of parents after having given an explanation of the state of the case and the dangers avoided by it. Many bad results now in the world would have been prevented if early paracentesis had been employed.

In double nasal operations where both nostrils are completely packed the risk of middle ear infection is greatly increased. I, on this account, refuse to operate on both sides of the nose at the same time without using a hollow splint. The contributors may now close the discussion.

H. P. BELLOWS: I have nothing further to say except to express my appreciation of the two additional points that were brought out in the discussion, namely, the possibility of ear infection from the nasal sinuses, and the other, the information in regard to the staphylococcus mucosus which I did not differentiate in its sphere of activity from the other forms of the staphylococcus.

BURTON HASELTINE: It is particularly pleasing to have so many members of large experience confirm me on points that are still matters of dispute. I did not say very much about bacteriological examination; when they are feasible they may give considerable help as to whether operation is necessary or not. I think that we should be careful in treating aural suppuration to take into consideration the pathological states of the nose which may accompany it. I have recently had a patient with subacute middle ear infection with partial destruction of the drumhead go through three attacks before I could get consent to clean out the ethmoid; it proved, as I thought, the source of the trouble all the time. After three attacks consent was given, and now there is restoration of the drumhead and no more trouble. I am willing to concede the point to Dr. Phillips about the tube drain, but in my way I feel a little more certain of furnishing support for the tissues until the cavity fills in. The last discussor mentioned the danger of impervious packing of both nostrils. I know of no condition in which I would put an impervious dressing into anybody's nose. I used to do it but I do not do it any more. You can always devise some way of allowing air to pass through the nose and thus not only greatly increase the comfort of the patient but also decrease the risk of extension of the infection.

I think the Yankauer tubal operation a clever procedure. It consists of a curettage of the lining of the tube to produce a closure in cases of chronic discharge. It is not a difficult procedure, and is no doubt justifiable where other measures fail which, in my experience, is extremely rare. If the source of the discharge is in the tympanic cavity this must be treated, if in the tube itself non-surgical measures should suffice, while if it is in the nasopharynx, it is more logical to direct our attention to that locality.

HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS.

DEPARTMENT EDITOR, PHILLIP RICE, M. D.,

San Francisco, Cal.

Ignatia in Hysterical Ptosis.

E. H. LINNELL, M. D., Norwich, Conn.

Miss M. M. T., aged forty-eight, first consulted me May 6, 1911.

Three years ago she had had an operation for tuberculosis of the right clavicle.

Since then her general health had been excellent, but she had been unable to use her eyes comfortably and had had great difficulty in keeping them open. She went about much of the time with the lids closed, only opening them for a second or two at a time. This was not because of photophobia but because of the effort required to keep them open. She had no constant pain, but her eyes became easily tired from use. There was no conjunctivitis, no paralysis and no ophthalmoscopic findings.

I made some change in the lenses she was using and prescribed Ignatia 6x, under which she made a rapid recovery.

Four months later she became quite nervous upon learning of the death of a friend, and had a slight return of the ptosis in a less aggravated form, and was again promptly relieved by Ignatia.

It is probable that the correction of her refraction and of a slight muscular imbalance was a contributing factor in her recovery, but it seemed to me that the remedy was of material benefit.

It was prescribed because the case seemed to be a pure neurosis coming on immediately after a surgical shock.

Baryta mur. in Otitis Media Catarrhalis Subacuta.

E. H. LINNELL, M. D., Norwich, Conn.

Mrs. L., aged forty-five, a strong, healthy looking woman, had an attack of grip in March, 1911.

This was accompanied with pain in the right ear which continued intermittently and with diminishing severity until she consulted me on the 28th of April.

Her hearing in the affected ear at that time was only contact for the watch and she complained of constant rumbling tinnitus.

The drum membrane was retracted and the apex of the manubrium was adherent to the promontory.

Under the influence of inflation, pneumomassage and merc. dulcis the tinnitus and pain disappeared, the adhesion was broken, and the hearing improved for the watch to five inches.

Then Baryta mur. 30 was prescribed for the following symptoms, viz.: "Voice sounds unnatural and, on swallowing, a feeling of suction extending to the ear."

In two weeks all subjective symptoms had disappeared and hearing was nearly normal.

Formica rufa in Aural Polypus.

ROYAL S. COPELAND, A. M., M. D., New York.

On November 27, 1911, I was consulted by a Mrs. H. R. She was complaining of a "feeling of numbness" about her right ear, together with deafness and discomfort, but no real pain or tinnitus. On examination I found the right canal filled with a mass of cerumen and hardened secretion. Upon its removal the tympanic membrane was found to be perforated. There was a slight discharge of foul smelling secretion. Protruding through the perforation was a polypus about the size of a grain of wheat.

This patient is a daughter-in-law of one of the strictest Hahnemannian homœopathic physicians this city has ever known. The patient, so far as knowledge of homœopathic medicine is concerned, is without doubt the best informed layman I have ever met. I would give a good deal for her knowledge. Needless to say she wanted no kind of operative procedure. Therefore, I placed her upon *hepar sulphur* 30x. There was no apparent change in her condition for two weeks. The patient called my attention to *Formica rufa*, saying that her father-in-law had always found it to be of the highest value in nasal polypus. She reasoned that if it is a remedy useful in nasal polypus it ought to be equally good in aural polypus. I gladly consented to the prescription, the patient supplied the medicine and took a few doses of this remedy in the cc. potency. Within a very short time the granulation had entirely disappeared.

A slight watery discharge continued, and on February 20th silica cc. was prescribed, and on March 1st sulphur cc. was given. I saw the patient last on the 16th of May. There was absolutely no discharge. The granulation tissue was absent and the ear perfectly dry. The perforation, which undoubtedly dates back for years, had not changed in size, but otherwise the ear is perfectly normal and possesses a reasonable degree of function.

My purpose in reporting this case is to call attention to *Formica rufa* as a remedy to aural polypus and aural granulation. So far as I know it has never been mentioned before in this connection. I take no credit to myself for the prescription or for the remedial treatment of this case. It has seemed to me so interesting, however, that I gladly transmit to the readers of the JOURNAL.

Spigelia and Mezereum.

PHILLIP RICE, M. D.

Spigelia: Sharp, shooting, stabbing and tearing pains radiating in and around the eye, especially the left; though the remedy is not altogether excluded when the right eye is affected. When the seat of the trouble is in the eye the pains extend from the eye back into the head

and over the temples, but when the cause is a neuralgic headache the pains extend forward from the head into the eye. The eye feels too large for its orbit. Intolerable, pressive pains in the eyes < turning the eyes; this causes intense dizziness, compelling the patient to turn his head. Severe burning pains in the eyes.

All symptoms are < during cold, wet weather, motion, touch, at night, thinking about them, from concussion or jar to the body as in making a false step, coughing or sneezing. Pains come and go with the sun; that is, begin the morning, reach their height at noon and then gradually subside. > by hot applications if neuralgic, but if due to headache heat < cold >.

Persons of the sanguine, mental temperament are more susceptible to its influence than are those of any other. They are anemic, thin, pale, debilitated, sensitive and distinctly of a rheumatic diathesis. They are predisposed to neuralgia in all parts of the body, but particularly of the head, eyes and face. Mentally they are inclined to be apprehensive, depressed, gloomy, easily irritated and restless. Exaltation of the special senses, in fact, excitation of the whole nervous system is characteristic. Following a period of nervous excitation, or strain, there is marked weakness and possibly an attack of neuralgia. Again, an attack of ciliary neuralgia follows some special strain upon the eyes as from reading in a poor light, reading on the train, or too continuous reading, or after an evening at the theater. This may occur in patients with otherwise normal eyes, or who wear the proper correction.

This type of patient is not infrequently met with in these days of strenuous living; and in the study of the remedy it is a factor of no less importance than are any of its most characteristic symptoms. In endeavoring to differentiate between this remedy and *mezeureum* in orbital neuralgia and prosopalgia the morphological combination of the patient is an important element in the case. The *mezeureum* temperament is the sanguine, vital, with a strong tendency to become fat and phlegmatic. Here we see at once a distinct difference between the two remedies. One has a thin, nervous, high-strung and sensitive temperament, the other a vital, fat and phlegmatic. *Spigelia*, as has been said, has a rheumatic diathesis, whereas *mezeureum* has a mercurial and syphilitic.

Mezeureum is the remedy par excellence in ciliary neuralgia following a surgical operation upon the eye, even though the operation was but the removing of a foreign body. The pains are aching and tearing in character, and radiate from above downwards, extending even into the face. Lightning-like pains along the course of either the infraorbital or supraorbital nerves and extend to the corner of the mouth or to the temples. Aching and tearing in and around the eyes, especially in the bony wall. Pains shoot into the cheek and teeth with lachrimation and injection of the conjunctiva. < touch, cold applications, cold air and at night. Herpetic eruptions on lids and face following an attack of severe neuralgia seldom or never require any but this remedy.

JOURNAL CLINIC.

Valsalva Minus.—Such Prof. Dench fittingly calls the following procedure. After closing the nose and ears as for the ordinary Valsalva, *inspire* or draw the breath *in* instead of expiring, draw the mucus down from the nasopharynx—hawk, and finally expectorate.

The object of this manœuvre is to draw from the mouth of the Eustachian tube all mucus that may have collected on the wall of the pharynx, and thereby keep it from being forced up the tube in the regular Valsalva inflation. This is done before the regular Valsalva for inflation of the middle ear.

To Relieve Choking.—Bend the body to a horizontal position,—do *not* bend the head on the chest, nor compress the chest or abdomen,—if sitting, separate the knees and bend over till spine is horizontal. The rationale is self-evident, as the above position places the parts—the larynx or glossoepiglottic sinuses—so that the small irritating substance need only to be pushed out horizontally and not raised vertically as when sitting upright. Proportionately, as it is easier to push a given weight along horizontal plane than to lifting it, it is easier to push the irritating substance out than to raise it vertically.

Quinine and Urea Hydrochloride.—From a year's experience with this substance in nose, throat and ear work, as well as in minor operations on other portions of the body, the author concludes that it is a valuable and safe local anesthesia. In using it no untoward systematic effects need be feared. Anesthesia may be obtained in from three to forty-five minutes; in the majority of cases, in the author's experience, anesthesia was complete in ten minutes. The anesthesia is as profound as with cocain, eucain or novocain, and of much longer duration, lasting from a few hours to several days, three days being the average. .

Bleeding is not controlled by the drug, though it is materially lessened, especially by the use of the stronger solutions. In none of the cases in which intranasal operations were done did it become necessary to pack the nostrils. In none of the cases of amygdlectomy was any change in diet of the patient ordered, and in no case did the patients miss a meal, the act of deglutition causing no pain.

Solutions ranging in strength from 1 to 4 per cent. were used. In general, in cases where primary union is to be obtained it is desirable to use the lower percentages, though sometimes, in vascular areas, the stronger solutions may be employed without materially delaying union. In wounds to be healed by granulation and not in vascular areas medium percentages should be employed. Where healing by granulation in vascular areas is expected the higher percentages should be used because of their hemostatic effect.—*W. Green, New York Medical Journal*, May 6, 1911.

CURRENT LITERATURE.

DEPARTMENT EDITORS

WM. McLEAN, M. D.,
New York City.

FRANK O. NAGLE, M. D.,
Philadelphia.

OPHTHALMIC RECORD. May, 1912.

1. A Brochure on Trachoma, by Daniel W. White, U. S. Eye and Trachoma Expert-at-Large, and C. E. Treibly, First Lieut., M. R. C., U. S. Army.

Article gives the experiences amongst over 100,000 Indians of the U. S., and states that 60 per cent.-70 per cent. are infected with trachoma. The Indians have had this insidious disease for many years. Trachoma is found in all countries, but very prevalent in Egypt, Palestine, Russia and west and southwest U. S. Climate, latitude and altitude have little or no effect. Trachoma is found in all races and all ages.

Trachoma is a specific infective disease of the subepithelial tissue of conjunctiva characterized by infiltration of lymphoid follicles which necrose. Later a formation of fibrous tissue, which may be so extensive as to obliterate the conj. sac. Minute ovoid bodies smaller than cocci have been found in the epithelial cells, by the use of Giemsa stain. These occur in a mass near the cell nucleus, but separated from the nucleus by a clear space. These bodies have not been cultivated or reproduced.

Disease begins in upper or lower fornix or gelatinous sago or frog spawn swellings. Later subepithelial tissue replaced by white streaks of newly formed tissue. Pannus may occur, the vessels of which are newly formed vessels from conj. and located in superficial area of cornea. As the disease advances the epithelial cells undergo mucoid change, and on top of the follicles they are almost entirely destroyed.

Infection occurs directly from the eye discharges or indirectly, bed clothing, wearing apparel, wash basins, towels, etc., also from the dust and in swimming pools. Another factor in the Indian is the habit of shaving the eyebrows, thus allowing the dust infected perspiration of the forehead to fall into the eye.

Four stages: 1. Incipient. 2. Follicular. 3. Follicular and hypertrophic. 4. Cicatricial.

Treatment—prophylactic. Isolate all cases. Individual towels and bed, running water (not basins or sinks), shower baths (not tubs), thorough disinfection. Prevent dust and improve hygienic conditions. 2. Systemic. Improve health of patients by good food and fresh dust-free air. 3. Medicinal. Doubtful if medicines are of much value. Argyrol, 20 per cent., cupric, sulphate, silver nitrate, lead acetate, ung. hydrard. ox. flav., etc. Astringents have a beneficial effect on hypertrophied tissue. The astringent and absorbitant and friction massage is as necessary as the operation itself. 4. Operative. Expression of the follicles with roller forceps very popular. Dr. White claims less after annoyance by the "sand paper" operation than forceps, and he has devised "silica trachoma rasps," which are to be used once only and then destroyed (as rasps are not perfectly sterilizable). In severe cases the "combined excision" operation of removing the palp. conj. a few millimeters below the papillary margin and the underlying tarsal plate, and covering over this raw surface with ocular conj. by stretching it and bringing the sutures on the skin surface of the eyelid, has given the best of results.

After treatment is necessary, whatever the form of operation, astringents being employed, and copper sulphate seems to be most efficacious. No patient should be discharged as cured until his lids are smooth and remain so even many months after treatment is discontinued.

2. Points in the Treatment of Corneal Ulcers, by Chas. Wray, London, Eng.

3. Single Rupture of the Choroid Involving Half the Circumference of the Eyeball, by F. C. Todd, Minneapolis, Minn.

Male, age 18. When 10 years of age received severe blow in the eye from a man's fist. Total blindness ensued for three days, and eye inflamed for a time. Vision is reduced to hand movements.

Ophthalmoscope shows single rupture of the choroid beginning at middle of disc extending forward on nasal side to the periphery of the fundus. Rupture is a little wider than the largest vein, and is located exactly in the horizontal meridian, and looks like a straight chalk mark on the fundus.

OPHTHALMIC RECORD. June, 1912.

1. A Case of Gumma of the Eyelid, by C. A. Clapp, Baltimore, Md.
2. Orbital Cellulitis With Report of Case.

Case described began as an infection in ethmoid cells, which was transmitted to orbital contents by forcible irrigation or excessive blowing of nose. Frontal pain a few days previous to swelling around eye.

Tissues of r. orbit very firm and tense with marked dusky hue, exophthalmos and chemosis marked. Local applications availed little, so operation advised.

Curved incision made continuous with eyebrow on inner side. Not finding pus incision carried down to periosteum, which was incised and elevated without finding pus. Also swollen conjunctiva incised and drains inserted. Pus appeared through the opening at inner side of orbit on the next day. Temp., which had been 102°, gradually subsided. Recovery good with no loss of function of eye. Cosmetic results satisfactory.

THE OPHTHALMIC REVIEW. June, 1912.

Coloboma of the Eye. Beatson Hird.

Congenital Ptosis with Associated Lid Movements of the Affected Eye. Thomson and Souter.

A New Mode of Measuring Muscle Balance. Maddox.

Oculomotor Polioencephalitis. Kaz.

JULY, '12.

Glaucoma Problems. Priestley Smith.

THE OPHTHALMOSCOPE. June, 1912.

Iritis. Arthur W. Ormond.

A Case of Chronic Membranous Conjunctivitis Treated With Vaccines. E. Arthur Dorrell.

JULY, '12.

Keratitis as a Cause of Myopia. James Alexander Wilson.

Detached Retina, Its Surgical Treatment. G. W. Maser, Parsons, Kan. [!]

THE JOURNAL OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY.

June, 1912.

Detached Retina, Its Surgical Treatment. G. W. Maser, Parsons, Kan.

The Control of Bleeding in Brain Operations. Joseph Rilus Eastman, Indianapolis, Ind.

Postoperative Tonsillar Hemorrhage. J. E. Sawtell, Kansas City.

THE AMERICAN JOURNAL OF OPHTHALMOLOGY. May 1912.

The Extraction of Steel, Spicules, Needles, Pins, Tacks, etc., With the Haab Giant Electro-Magnet, by N. J. Weill, M. D., Pittsburgh, Pa.

A Case of Optic Papillœdema and Paresis of the Third Nerve Caused by Inflammation of the Ethmoidal Sinuses, by J. B. McCubbin, M. D., and C. Armin Gundelach, M. D., St. Louis, Mo.

Serpiginous Ulcer—Complete Involvement of Cornea—Recovery Under Mixed Vaccine and Urotropin, by J. W. Charles, M. D., St. Louis, Mo.

JUNE '12.

Sarcoma of the Choroid: Unusual Clinical Features, by John Green, Jr., M. D., St. Louis, Mo.

Microscopical Examination of the Eye in the Case of Choroidal Tumor Reported by Dr. Green, Jr., by Adolf Alt, M. D., St. Louis, Mo.

ARCHIVES OF OPHTHALMOLOGY. July 1912

I. The Treatment of the Early Stages of Senile Cataract, by Lieutenant Colonel Henry Smith, M. D., V. H. S., I. M. S., Amritsar.

Dr. Smith first used subconjunctival injections of cyanide of mercury on a European lady going to him for treatment of an early stage of senile cataract. She complained she could no longer see to read or write, and that distant vision rapidly becoming useless. Examination showed thin nebula on each cornea resulting from old trachoma. Pupils were dilated with homatropine, and he observed nebula as only a partial cause of failing sight. She having incipient cataract in both eyes 20 m. of 1 in 4,000 cyanide of mercury injected, and in one month she reported the result as marvelous. Could see well at a distance and with glasses thread a needle. Dr. Smith reports that the pain induced by these subconjunctival injections under cocain is very severe. It lasts for three or four hours, after which it amounts to a mere inconvenience. It may be necessary to put a patient lightly under chloroform, also hypo of morphia. Eye exceedingly ugly looking for some days. Have never seen any evil results. Improvement first noticed by patient on third or fourth day. Improvement continues for about a month. Most promising cases are those in which distant vision has

been reduced to not over thirty per cent. Dr. Smith used this treatment on nine cases, all with remarkable results.

2. Two Cases of Epibulbar Sarcoma, by Dr. Carl Koller, New York.

3. The Trachoma Question, by Dr. K. Lindner, Vienna, Austria.

4. Simple Flap Extraction of Senile Cataract, With Peripheric Incision of the Iris, by Professor Elschmig, in Prague. Translated from the *Arch. f. Augenheilk.*, Vol. LXIX., 1911, the German edition of these Archives.

5. Remarks on Elschmig's article on Cataract Extraction, by Professor C. Hess.

6. The Size of the Blind Spot and Its Distance From the Point of Fixation in the Emmetropic Eye. By J. Van der Hoeve, Utrecht, Holland. Translated from the *Arch. f. Augenheilk.*, Vol. LXX., No. 2, 1911.

7. Retinal Lipæmia in Severe Diabetes, by C. G. Darling. (With one drawing on text plate V.)

The patient, a male, 48 years old, suffering from severe diabetes. Urinalysis repeatedly verified the diagnosis. Vision affected in both eyes, but none in the right muscle. Balance normal. Presbyopia more advanced than normal. Intraocular tension normal. By ophthalmoscope optic disc clearly outlined. Retina, normal; no hemorrhage. Vessels not tortuous, moderately dilated and looking like waxy, light pink lines on a red background, normal color. A study of the blood showed a large amount of free fat. The blood in the pipette had the appearance of gray milk. The literature contains reports of seven cases by as many authors.

8. Concerning Metastatic Inflammation of the Eye in Gonorrhœa, by Docent Dr. Sidler-Hugenin, Zurich. Translated by Dr. Alfred Braun, New York, from *Arch. f. Augenheilk.*, Vol. LXIX., 1911.

THE JOURNAL OF LARYNGOLOGY, RHINOLOGY. June 1912.

A Contribution to Serum and Vaccine Therapy in the Treatment of Intracranial Complications of Middle Ear Suppuration. A. Logan Turner.

An Examination of One Thousand and Fifty Skulls. Some Points of Interest in Connection With the Surgery of the Ear and Nose. W. S. Syme.

A Method of Detecting Fixation of the Stapes. F. P. Sturm.

JULY, '12.

The Technique of Auditory Examination in Infancy. P. Maurice Constantin (Marseilles). Translated by Macleod Yearsley.

Case of Congenital Occlusion of the Right Posterior Naris by a Bony Plate. H. Bell Tawse.

Reports for the Years 1910 and 1911 From the Ear and Throat Department of the Royal Infirmary, Edinburgh. Statistical Tables. Raymond Vérel and J. Milne Dickie.

BOOK REVIEWS.

"DAS TRACHOM NACH DEM GEGENWÄRTIGEN STANDE DER FORSCHUNG."
VON PROF. DR. G. STANCULEANU, Vorstand der Universitäts-Augen-
Klinik in Bukarest, und DR. D. MIHAIL, Chef des Laboratorium der
Universitäts-Augen-Klinik in Bukarest. Mit 23 Figuren in Texte,
2 Karten und 1 farbigen Tafel. Wein und Leipzig. Verlag von
Josef Safar. 1912. Price, \$2.80.

Trachoma being an endemic disease in the greater part of Europe and Asia, it is but natural for us Americans to look to these countries for new clinical facts and pathological research. So we welcome a book devoted to trachoma—placing this disease in the light of modern research—by Professor S. Stanculeanu and Dr. D. Mihail, of the University Eye Clinic at Bukarest.

The features of the book are a special consideration of the geographical distribution of trachoma, a chapter devoted to the etiology, especially the microscopic changes in the trachoma follicles, with a thorough discussion of the so-called trachoma parasites and the various opinions as to their real character, whether they are perinuclear degenerations or protoplasmic changes in the cell substance. Excellent plates accompany the discussion. Professor Stanculeanu gives considerable attention to acute trachoma, classifying three divisions—catarrhal, follicular forms, bullar. This is really something new, and shows that the author has had great experience with trachoma.

The book treats thoroughly of the complications of trachoma, and concludes with a chapter on the therapeutics, giving us the relative value of drugs employed, besides those found in the classical prescribed text-book treatment.

F. O. NAGLE.

The Journal of Ophthalmology, Otology and Laryngology

Vol. XVIII

Lancaster, Pa., and New York, September, 1912

No. 9

EDITORIAL.

N. Y. OPHTHALMIC HOSPITAL; SIXTIETH ANNIVERSARY.

THE sixtieth anniversary of the New York Ophthalmic Hospital calls for more than a cursory notice. Incorporated April 21, 1852, it was opened at 6 Stuyvesant Street, between 2d and 3d Avenues, with Drs. Valentine Mott and David L. Rogers as Consulting, and Mark Stephenson and John P. Garrish Attending, Surgeons. 374 patients were treated in 1852. Dr. Stephenson gave a course of lectures to a class of whom 30 were listed in the 1853 Annual Report, with a notice that those paying later would be named in the next Report.

The Report for 1858-9 gave the location of the Hospital as 63 3rd Avenue, near 11th Street, whence it was moved a couple of years later to 387 Fourth Avenue, corner of 28th Street—the old Peter Cooper mansion. In 1864 the clinics were held daily instead of Tuesday, Thursday and Saturday and the fee for the course was changed from five to ten dollars; three years later this was raised to \$20.00.

January 10, 1867, the Board of Directors adopted the following:

"WHEREAS, We, the Board of Directors of the New York Ophthalmic Hospital, are fully convinced that the homœopathic system of treating diseases of the eye is more effective in restoring sight and less painful to patients than the one now in use in this hospital.

Resolved, That there should be in New York City at least one eye infirmary in which the principles of homœopathy may be applied free of all charge."

Resolved, That the retiring Consulting and Attending Surgeons and Physicians of this Hospital are held by this Board in the highest esteem for their personal worth and professional eminence, and that the thanks of the Board are hereby tendered to them.

Consequently the following staff was appointed:

Attending Surgeons, Drs. C. Th. Liebold, T. F. Allen, J. M. Wetmore and C. A. Bacon; Consulting Staff, Drs. P. P. Wells, H. D. Paine, G. E. Belcher and Carroll Dunham.

The first homœopathic class—1867—numbered 80; Dr. St. Clair Smith was one of these.

In 1871 the Hospital was moved to its present quarters, 201 East 23d Street, which was so munificently endowed by Mrs. Emma A. Keep.

To and including 1879 more than thirty-seven certificates were issued under this administration.

In the latter year the charter was amended by the State Legislature authorizing the directors of this hospital to confer the degree *Oculi et Auris Chirurgis*; this has been the only degree in ophthalmology in the world until Oxford initiated its "Doctor of Ophthalmology" in 1910.

The first class to receive this degree, in the spring of 1880, comprised Drs. C. C. Boyle, *C. A. Rudolph Eggeman and James F. Brown. Upon that occasion the new degree was conferred also upon the following assistant surgeons: Drs. D. B. Hunt, W. E. Rounds, J. H. Buffum, Charles Deady and N. L. MacBride.

The charter having been modified by a special act of the legislature for the purpose, on April 3, 1883, from the nose and throat clinics was developed a faculty of instruction upon whose recommendation the college granted a certificate in laryngology. The first to receive this were, in 1885, Drs. A. Worrall Palmer and Charles Edwards Teets. In 1895-6 this was amplified to "a clinical and didactic course" of forty lectures and daily clinical instruction, covering the nose as well as the throat, for a certificate in rhino-laryngology.

It is hoped that before long the courses will be so merged that our degree, O. et. A. Chir., will represent a practical knowledge and skill in diseases of the nose and throat as well as of the eye and ear.

In the fall of 1896, for the first time in the history of postgraduate medical training, an entrance examination was required (in addition to an M. D. a year old), but this was abandoned the following year.

With the session of 1898-9 the course was lengthened from six months to seven; two years later it ran from October 1, 1900, to June 12, 1901, but since then has terminated in the middle of May (seven and a half months).

In the forty years under homœopathic administration the hospital has issued 181 diplomas and 53 certificates.

*Deceased.

The following are the only institutions of this kind that antedate ours:

Austria had the first free hospital care of eye diseases, two wards of the Vienna Hospital being set aside in 1773 for eye diseases.

In 1804 Dr. Saunders opened the first eye infirmary in London.

The Eye and Ear Infirmary of the City of New York was established in 1821 by Drs. Kearney Rogers and Edward Delafield who are quoted as "fathers of American ophthalmology."

The Massachusetts Eye and Ear Infirmary was established in Boston in 1826.

We call upon each and all of the graduates of the New York Ophthalmic Hospital to make a special effort and help celebrate by their personal attendance this anniversary. It will be notable for its coöperation with the Surgical Congress which is to be held in New York next November. Dr. Coakley, who has general charge of the Eye, Ear and Throat Department, has appointed, in our hospital, Dr. Norton to arrange eye clinics, Dr. McDowell clinics for the Ear and Dr. Teets for the Throat. One operative clinic will be held by each surgeon during the week ending November 16th, as per following schedule:

November 11th, 2 to 4 P. M., Laryngology, Charles E. Teets.

November 12th, 2 to 4 P. M., Otology, George W. McDowell.

November 12th, 2 to 5 P. M., Ophthalmology, A. B. Norton and C. H. Helfrich.

November 13th, 2 to 5 P. M., Ophthalmology, C. C. Boyle and E. S. Munson.

November 13th, 2 to 4 P. M., Laryngology, I. Townsend.

November 14th, 2 to 4 P. M., Laryngology, A. Worrall Palmer.

November 14th, 2 to 5 P. M., Ophthalmology, F. H. Boynton and G. DeW. Hallett.

November 15th, 2 to 4 P. M., Otology, G. A. Shepard.

November 15th, 2 to 5 P. M., Ophthalmology, F. G. Ritchie and C. Deady.

November 16th, 2 to 4 P. M., Laryngology, S. H. Vehslage.

Note.—Regret the omission from Business Session of Dr. Haseltine's report of the Committee of Education, an animated discussion of which occupied a large portion of the 4th Session. The JOURNAL delayed publication twelve days to obtain this important report.

BUREAU—REPORTED CASES.

W. H. PHILLIPS, M. D., CHAIRMAN,
Cleveland, O.

(Continued from July Issue.)

SOME VACCINE CASES IN OPHTHALMIC PRACTICE.

W. H. WATTERS, PH. D., M. D.,

Director of Department of Pathology and Bacteriology Evans Memorial for Clinical Research; Professor Pathology, Boston University.

IT is with some hesitancy that an outsider comes to a meeting of specialists to address them upon methods of treatment directly connected with their specialty; and this hesitancy is increased by the fact that the specialty is one of the most complex and that the outsider has but a very superficial knowledge of the subject. Add to this the fact that he came almost unasked and you may to some extent realize the position of the present speaker.

During the past five years it has been my privilege to treat with vaccines a large number of patients at the Massachusetts Homœopathic Hospital. In this number there have been all kinds of results from the most favorable to those not in any way responding to the inoculations. Among these have been some eye cases that have proven very gratifying in their final outcome. Before citing these a few words concerning our methods in general may be added with advantage. With tuberculin as the only exception we make all of our own vaccines in the laboratory, culturing, standardizing and sterilizing them. We believe that by using our own preparations we obtain better results than are produced by those made by the various pharmaceutical houses, as our cultures are almost always directly from the host or at most but one or two subcultures away from the time when the organism was a strict parasite and so presumably most virulent and active. In preparing vaccines for wholesale manufacture this is not usually done, one culture being used over and over again till its vegetative properties would seem to be developed at the expense of its virulent ones. Even

the passage through animals does not entirely simulate the conditions present in the human being.

With tuberculin, the concentrated ground bacteria, bacillen emulsion, is purchased from reliable sources and from it the dilutions are made fresh as needed.

We adhere strongly to the minute dosage in the use of tuberculin, usually beginning with .0001 mg. and gradually increasing to .001 mg., but never exceeding that amount. This corresponds roughly to our 6x-8x dilution. It is probably unnecessary to state that all treatment is hypodermatic and made in the subcutaneous tissue of the upper arm.

Leaving the theoretical considerations for other times let us inquire in what conditions the new method of treatment has proven beneficial in conditions of interest to this society.

First, in ophthalmology. Probably in this department more cases of tuberculous ulcers of the cornea have been treated than any one other condition. Allow me to cite a case.

Master N., age five years. Last August first noted slight conjunctival injection with increased secretion. This became steadily worse and soon the secretion became purulent. Could not bear light; eye constantly covered with gauze and bandages, and colored glasses worn. In October I first saw the boy, and at this time made cultures and advised vaccine treatment. This was not followed. Condition became steadily worse. In November Dr. Wells was consulted. He found an ulcer of the cornea, deeply penetrating. Perforation occurred within a few days. He advised the use of vaccine. This was immediately followed this time, using tuberculin and staphylococcus, all other treatment being the same. The father of the boy is a well known physician, who, needless to say, watched his son with great care. He tells me that within three days he was able to note a distinct change. The condition that had been steadily progressive gradually stopped. Dr. Wells says that in a short time evidence of regeneration appeared. The amount of pus steadily subsided. By degrees the outward signs of trouble were discarded, first the head bandage, then the gauze dressing, the absorbent cotton pad, and finally the colored glasses. As the ulcer began to heal adhesions of the iris were noted and but little sight was anticipated on account of this and of the scar that was so extensive as to practically cover the entire pupil. Later the adhesions gave way leaving an intact iris, and gradually the scar has become smaller and thinner. Colors can now be recognized and improvement

seems to still continue. Treatment with tuberculin continues once a week but will soon be discontinued.

The case is cited because it is one that has had from the first practically the same treatment and hygienic care. Under this it steadily became better. In my clinic in the Out Patient Department of our hospital three other somewhat similar cases have been treated with equally good results by my assistants, Doctors C. A. Eaton and H. W. Nowell.

All three of these cases were referred from the East Boston Dispensary to the Eye Clinic of the Out Patient Department and from there referred to the Vaccine Department. They all showed ulcerative conditions of the cornea, and in each case the prognosis was unfavorable. Treatment was begun early in February, 1911, and has been continued to the present time at intervals of at first one week, more recently two weeks. All three cases began to show marked improvement within a short time after the beginning of the treatment. Ulcerative conditions that had been persistent for some time and seemed to be extending steadily and gradually subsided. In September, the acute manifestations of the disease had entirely subsided. In two cases this was followed by complete return of vision. In the third case an area of cicatricial tissue persisted in one eye. This slowly cleared, and at present the child can distinguish objects when close to the eye.

Another case of considerable interest was that of a young girl sixteen years old, who came to me for treatment for long continued furunculosis with the appearance of numerous so-called "styes" on the eyelids. These latter were accompanied with considerable conjunctivitis and rather seriously interfered with her school work. Under autogenous staphylococcus vaccine the furunculosis readily cleared up but no effect was apparent upon the eye condition. A cutaneous skin test for tuberculosis gave positive results and tuberculin was begun. Under this the "styes" promptly disappeared and no new ones came to replace them. With the cessation of the staphylococcus the furuncles once more started and it was only with the alternate administration of the two that complete recovery was attained.

Another case of "styes" is now under treatment where I can carefully watch the effect of each inoculation. Here it has been possible to demonstrate beyond question that the tuberculin is efficient. Thus treatment too long delayed is followed by reappearance of the trouble.

When administered just as the condition reappears it aborts it and when properly timed it prevents any recurrence. Along a somewhat different line is a case recently seen with Dr. Suffa. This was a man who at some time previous had had a piece of steel lodge within the eyeball. There was resultant panophthalmitis and considerable infection. He consulted Dr. Suffa who advised enucleation. Following the operation suppuration appeared as might well be expected, and involved both lids as well as the orbit. The appearance was almost erysipelatous with a dirty grayish membrane in the wound. In fact, a distinctly serous appearance was present. Vaccines were prepared and administered every second day (*streptococcus* and *staphylococcus*). Following their use the inflammatory and suppurative condition steadily and rather rapidly subsided, the fever disappeared and convalescence was very satisfactory. Dr. Suffa expressed to me his belief that the treatment was distinctly beneficial, but I hope he may discuss it more at length here.

Having now occupied nearly all of my allotted time I will merely pause to mention by name other vaccine fields in the realm of this society. Thus in otology, subacute otitis media can often be much hastened to favorable termination and complications rendered less probable by careful use of vaccines. In otitis externa furunculosis the treatment is always indicated and will nearly always be most gratifying in its results. It seems probable that some cases of mastoiditis may be thus cleared up without recourse to operative procedure.

In chronic inflammatory condition of the antrum, frontal sinus or ethmoidal cells there has been much discouragement where much was anticipated. This is probably due to the difficulty of obtaining good drainage. Even here, however, some brilliant results make us advise the wisdom of testing out the treatment rather widely. Time prohibits citation of cases.

Many gratifying cases there have been of acute and chronic rhinitis, chronic, subacute and acute pharyngitis, a few of laryngitis.

Ulcers of mouth, *streptococcus* in origin, have promptly cleared up. Bronchitis in many forms has been treated and has yielded in perhaps a greater proportion of cases than has any other one form of respiratory affection.

Time further forbids discussion of certain types of asthma that have shown much benefit.

If cervical adenitis is classed as within the sphere of this society I

may pause merely to state that here vaccines are practically always indicated and that the results therefrom will in not a few cases obviate the necessity for surgical interference.

In closing I wish to add but one parting thought. Vaccines or bacterins are vegetable (or bacterial) toxins, and like all other poisons are capable of harm when improperly used, just as they can do much good in their proper places. One must not, therefore, use them promiscuously without knowledge or advice and then when the desired results do not follow condemn them. It is better, far better, to talk over each individual case with some one who has had experience with the method, at first at least, and thus to follow the modern and truly scientific trend in medicine to individualize and not to treat the disease, *per se*, merely as a case apart from the patient. Thus will better results be attained, and I believe the workers who do this will come more into accord with the sentiments expressed in this paper than will those who look upon vaccines as a promised cure-all available to anyone skilled or unskilled in this application.

So E. Concord St.

GENERAL DISCUSSION.*

DEAN W. MYERS: I have been anxious to perform as many operations as possible without iridectomy, because it seemed to me if it could be done that way without detriment to the patient it would be an ideal procedure. I have been working with that idea in mind for the last four years and the results have been reported at various meetings of this society. The conditions at the Ann Arbor clinic are peculiar and difficult and the difficulties are increasing each year as the clinic grows larger. All the eye work has to be done in the same operating room in which general surgery is performed. We lack, therefore, the important feature of having a special operating room with modern appliances. We are hopeful of having a new building which will give us a special operating room. Under these circumstances you will admit, I think, that our percentage of infections is very slight.

R. S. COPELAND: I have long been interested in the operation for the removal of the lens in the closed capsule, as long ago as 1896, going to Wiesbaden to see the originator of the idea and to witness the intracapsular extraction of cataract. It has always seemed to me, other things being equal, to be the ideal operation, because by the extraction of the lens in its capsule, no particles of the lense substance nor of the capsular membrane could possibly be left to cause further trouble. In addition to eliminating all the factors of secondary complications, it

*The papers of this Bureau were published in the July issue.

leaves the clearest possible vision. So I agree fully with Dr. Myers that it is of the greatest value and entitled to our study and consideration.

Some years ago I made a series of cataract extractions by a method that was a modification of the Smith operation, and the thing that impressed me then and since, in reading accounts of the operation, is the fact that you have little iritis to deal with afterwards and that is worth a lot. There is no doubt in my mind but the trauma of the retained particles of lens substance and capsule pounding against the delicate tissues of the iris is largely the cause of the iritis.

I am not so enthusiastic as Dr. Myers in regard to the little liability of loss of vitreous. Undoubtedly, one who is familiar with the operation and who does it frequently enough to keep his hand in can do this operation without serious loss of vitreous and with reasonable certainty of good results. But when it is asserted that the risk of losing the vitreous is not increased by extraction within the closed capsule, over what it is with the usual operation, the assertion must be taken with a grain of salt. Of necessity, there must be a great deal more likelihood of losing the vitreous.

But as a personal matter, I am not greatly disturbed over the loss of vitreous, because I do not believe that with our modern resources it is such a serious thing. I remember one patient I operated when there was such an extensive loss of vitreous that the eyeball collapsed like a deflated foot ball. By the immediate use of sterile, normal salt solution the eyeball was filled, the patient made a good recovery and, when last seen, three years afterward, she still had good vision.

This is an operation to be commended, but not one that we should recommend to our younger colleagues, because in my opinion we have not advanced far enough in our experience with it to justify us in advocating it as the operation of choice in all cases or for all operators. I am glad that Dr. Myers has his mind directed towards the utility of this procedure and that he has ample opportunity to work it out and give us the benefit of his experience.

G. A. SHEPARD: In regard to the loss of vitreous it has been my experience and it has also been the result of what I have read upon the subject that although the vision following may be immediately good or fair that later it is apt to be followed by a degenerative process in the posterior chamber so that the later effect is bad and that it is therefore a thing to be carefully avoided. The average result is impaired by the loss of vitreous although no immediate bad effects may be observed. It is a logical conclusion to come to that the posterior chamber filled up with some other substance than the natural fluid cannot do as well as when it is not lost. I think that Dr. Knapp has said the same thing in one of his papers, as the result of his large experience.

I would ask Dr. Myers if he has found the lid elevators superior to the ordinary speculum?

DAVID W. WELLS: Dr. Myers has stated it about right when he said that the true method of measuring success of a surgical procedure is not by the visual result. That is, regarded merely as a surgical procedure—a mechanical operation,—in order to judge properly about it, we should know the percentage of iritis and of the loss of vitreous. The operator, too, is a factor; many men would refuse to operate on cataract cases where light perception is as poor as he describes. Now it is not fair to count in those cases and allow them to reduce the general average of vision and thus militate against the operation. In the report of Dr. Green there was such a large percentage of success as to vision that the A. M. A. appointed a committee to investigate his results. While I have not the exact data, my remembrance is that his results were substantiated, but attention was called to the fact that his visual tests were made with white letters upon a black ground and that with such cards the vision shows higher and better than with black letters upon a white ground. With the exception of that one factor, his results were substantiated.

C. L. RUMSEY: May I ask how Dr. Myers makes the incision in the capsule? I have gone along operating and not had to do any needling for a year and then I have had the experience of doing a lot of needling and it has always puzzled me why that was so. I have found the cross incision better because the capsule rolls back and gives a larger pupillary area.

W. H. PHILLIPS, Chairman: I will explain to the doctor as he did not come in until after the paper was read that the subject is the "intracapsular" extraction of cataracts. I should like to ask the essayist if the iris does not tend to become entangled in the corners of the wound when the incision is so large as he speaks of? Does he find that the original vision is maintained after a year or two? or is there a progressive loss of vision? It seems to me in contradistinction to what Dr. Wells has said that the real and final test of the success of any cataract operation must be the amount of vision gained and retained. Statistics to be of value must include a large number of cases; the fact that a man reports vision of 20/20ths after two or three intracapsular operations means nothing for the same results might be attained and often are attained after the same number of extracapsular operations. One hundred operations extracapsular and one hundred intracapsular under as nearly as possible the same conditions, and the results compared, would be data worth something.

D. W. MYERS: I feel that you have all been very kind. I do not claim, as Dr. Copeland intimates, that iritis is excluded from the complications of this operation. In the operation that I do, iritis is a factor to be reckoned with. I had fifteen cases of iritis in sixty-five operations, some of them very violent. Most of them yielded to ordinary treatment. This operation removes the lens within its capsule through the undilated pupil. The pupil is dilated mechanically by the delivery of the lens through it. In this way the muscle fibers are uninjured and

immediately contract after the delivery of the lens. I believe Dr. Copeland's cases were all done with iridectomy; I operate without iridectomy in a large proportion of cases.

I do the work in artificial light, the light being held directly over the eye. It contracts the pupil as soon as the opacity is removed and light penetrates. The upper part of the iris is prolapsed outside the wound during the delivery of the lens. With the Smooth loop it is at once replaced in the anterior chamber. It is surprising to see how quickly the pupil resumes its natural position so that the eye does not look as if anything had been done to it.

In a number of cases I have used Eserine after the operation, but I am not sure that I like it; it seems as if Eserine tends to cause more violent iritis. The statistics on that point are not complete so that I will not speak certainly of it. While iritis is a factor to be considered, I believe that it is of much less frequent occurrence with this operation than when the capsule is left in the eye. In regard to loss of vitreous, I do not like to have it occur and try to avoid it, but when it does occur I do not dread the result because I have had excellent results when much vitreous has been lost. The result is not necessarily bad by any means. I am not prepared to say anything yet about the secondary degeneration or late deterioration of vision; I shall be on my guard about it. I have one case of senile cataract in a man fifty years old, a lover of horses and fond of active outdoor life. The cataract was removed without iridectomy, but the capsule remained, a portion of it occupying the pupil which was displaced up and slightly to one side but otherwise satisfactory. In a month the vision was 20/20ths. It was one of the few cases in which I obtained 20/20ths vision after operation. He had good reading vision and was much delighted. He went to his home and went to training horses, drove into Ann Arbor, about forty miles, and back next day. He let himself loose, so to speak, and enjoyed life to the full. He could not say enough about the operation or the operator. After a year he wrote me that he was getting blind in that eye; I examined it and found a portion of the capsule still there, but not sufficient to disturb his vision. I advised him to have it needled and to stop use of eye and to lay off a while. He did so with slight improvement only. His vision continued to fail; it got to 20/100ths and I could not make it better. I could not dilate the pupil sufficiently to make a fundus study. He finally consulted an oculist in Lansing, who told him that all my cases went bad and advised another operation. The result, he claimed, was good vision for two days and then it failed again. I do not think that there was detachment of the retina in that case, although I never could get a distinct view of the fundus.

DAVID W. WELLS: Could not you dilate the pupil?

DEAN W. MYERS: No; it would not dilate, although there were no adhesions.

I agree that this is an ideal operation for immature cataracts, mak-

ing it possible to operate without waiting for them to become mature. It is also *par excellence* the operation in hypermature cataracts; it prevents the anterior chamber from being filled with particles of soft lense substance and capsule. With it you get a clean black pupil that is very satisfactory.

In regard to the question about lid elevators and speculum; if you have an assistant who works with you always, that is, if you have an assistant specially trained for your work, and do not have to change almost every time you operate, the elevation of the lids by the assistant with elevators is entirely satisfactory. If you have to utilize different assistants as we do at Ann Arbor it is better to get along with a rigid speculum. I have a rigid speculum with a lock, similar to Smith's. It is held with the two last fingers of the hand by pressure against the cheek. In making the incision I pay no attention to the speculum. I make the incision large, about the corneo-scleral margin, beginning just above the middle line, not below it. To extract the lens in its closed capsule you must have a large incision.

The incarceration of the iris in the incision occurs in a small percentage of cases. If only visible through the incision I pay little attention to it, but if it bulges out, I cut it off. There will be slight escape of aqueous humor. I have had one case in which there was incarceration of the iris all along the incision. It should have yielded excellent results, the extraction was as pretty a one as I ever saw. The pupil was perfect and in the exact center. The patient was quiet, lying on his back for forty-eight hours. At the first dressing the iris was slightly incarcerated, at the next dressing it was bulging slightly, but not enough to cut it off with scissors. It was a case of delayed closing of the incision. I cauterized with the electric cautery the whole length of the incision allowing a slight escape of vitreous. It healed in five days. I will be glad to make a later report of this case.

Extirpation of the Lachrymal Sac, by David W. Wells, M. D., Boston, Mass.

W. A. SHEPARD: I desire to compliment Dr. Wells, it is a great privilege to listen to such a paper.

FRANK O. NAGLE: I have seen this operation done in Loewe's clinic in Germany with bad results. It was an unfortunate case, the patient had hypertrophic rhinitis and there was perforation of the ethmoidal cells. The wound was infected from the nose.

DEAN W. MYERS: This is a very valuable paper to have read before us. I can add nothing to its value or completeness, but I may speak of a case of trouble with the lachrymal sac that came under my observation. The patient came to me with trouble there; he stated that he had been wearing a solid stylus and that it was giving him considerable pain and disturbance. Numerous attempts had been made to remove it, but without success. The manipulation had undoubtedly increased the inflammation. I did some probing myself and made out its presence deep down in the bottom of the sac. It was so deep that it evidently

was going to be difficult to remove. It occurred to me to examine the nose and there I found the style projecting through the bone just beneath the anterior end of the middle turbinate. All I had to do was to draw it out through the nose. It was the most remarkable case of false passage I have ever seen.

W. A. SHEPARD: I call attention to the necessity of extremely delicate touch and great care in passing the probe in this canal. Some of our worst cases are the result of improper and careless passing of the probe through the sac and down the nasal duct. The mucous membrane, soft and flabby or swollen, may get in front of the probe which is pushed on without giving it a chance to recede. I am sure that a vast amount of scar tissue and a number of incurable cases of lachrymal sac trouble is due to careless passing of the probe. We should be as careful in doing this little operation as we are in a cataract operation.

GEO. A. SUFFA: What is the custom about syringing this duct after probing? and how often is the caniculus cut? In my own practice I avoid cutting the caniculus by using from five to seven probes and then by means of a special syringe of four ounce capacity I syringe through one-half cup full of weak borax solution. I introduce a nipple about the size of a No. 5 probe on the end of the syringe into the upper part of the duct. In this way I have never cut a duct in my life. You will know that you are in the duct by the size of the stream of water that passes through; frequently you will push through quite a lot of gelatinous mucus that is a good thing to get rid of. Where it comes from I do not know. Sometimes little clots of blood come through. I repeat the syringing every day for several days and then probe again. I place a great deal of importance upon the thorough cleaning out of the sac, freeing it from mucus and clots by means of the syringe. I have had very good results by treating them in this way.

W. H. PHILLIPS: Dr. Suffa's discussion is a little away from the subject; the paper is upon the extirpation of the lachrymal sac.

GEO. A. SUFFA: I beg pardon.

McLEAN: I wish to thank Dr. Wells for his very complete paper. The operation seems easy until one tries it. I have operated twice by this method. The first was a girl about nine years old; she had been under various kinds of treatment without much improvement. As I was not adept with the method, I preferred general anesthesia. It took me nearly an hour to remove the sac, and it was not removed in one piece either. This was because the sac was very adherent. When it was entirely removed I curetted the bone gently, and also curetted the nasal duct. The case cleared up very nicely. The discharge ceased and there were no ill effects. For two or three weeks there was a slight swelling along the margin of the lower lid, especially whenever she was out in the wind.

The second operation was upon an orphan girl of about the same age. She was sent to the hospital by the Charity Organization Society, as they failed to find a home for her on account of her chronic dacryo-

cystitis. I performed the operation under general anæsthesia, following the same technique as in the other case. The condition of the sac was not as bad, and the operation not as difficult. I removed the lachrymal gland as a precaution against epiphora, because she might be sent many miles away. I would ask Dr. Wells to tell us in what per cent. of cases does he remove the lachrymal gland. Meller says it is advisable when the patient lives at a distance.

F. C. LEE: I did this operation a short time ago in a case in which there was a great deal of adhesion. By using sharper instruments than usual I was able to get the adhesions broken up and remove the sac in larger pieces. I think that the Meller operation is as near as can be to an ideal operation.

E. W. BEEBE: The thanks of this society are due Dr. Wells for his excellent paper delineating the modern method of "Extirpation of the Lachrymal Sac," but I must offer a protest to his recommendation of this comparatively formidable operation, as a substitute for those less severe, and possibly more effective methods, in universal use, for the relief of stenosis of the lachrymal duct; for it seems to the writer, that of all the many methods which have at one time or another been employed for this purpose, it is the least desirable.

According to Norris & Oliver this method was practiced in Rome eighteen hundred years ago, only to be abandoned after a thorough trial; seven hundred years later, it was revived by Paulus Aegineta, to be likewise discarded. Again in seventeen hundred and forty-eight it was taken up by Nanoni, of Florence, whence it spread to Germany and France, and received the disapproval of the profession as before.

Desmarres favored it in certain intractable cases, but declared it should only be used as a dernier resource, and adds, "that if a cure can be made by other means, sound practice counsels its employment," to which opinion Norris & Oliver say they are heartily in accord.

It is very generally understood at the present time, that extirpation or destruction of the sac by other means, will relieve blenorrhœa, and possibly suppuration also, but these ancient methods do not receive the sanction of the profession, by reason of the fact, that epiphora must necessarily follow such procedures for the relief of which, removal of the lachrymal gland, is the only resource.

It is generally conceded also, that a persistent epiphora is a far greater menace, and annoyance to the patient, than is that of the fistulous opening of the sac, so commonly the result of neglect of lachrymal strictures; an epiphora, being a condition requiring constant attention, and one that not infrequently incapacitates the person from engaging in many occupations, while the fistulous openings in the sac requires attention but seldom, and do not interfere with vision in a marked degree, if at all.

This is a sufficient reason, I believe, why this old time method should not again be brought to the front; it being far better to allow them

to progress, than to perform any operation which will be likely to be followed by a troublesome epiphora as a sequel.

I take it for granted that Doctor Wells believes, as does most authorities, that the average case of stenosis, has its origin in a catarrhal condition of the nasal duct; if this be a fact, then consistently it should receive treatment at the hands of the rhinologist in its incipency, rather than from one whose work is confined to ophthalmology entirely.

From the perusal of his paper, I received the impression,—for there was nothing said to the contrary,—that in the management of his cases of lachrymal disease, it is his habit to treat them from the standpoint of the surgeon only, and if this be the case, and their etiological factors and therapeutic measures, other than by the use of the knife are ignored, it is not to be wondered at his disappointment and lack of success in the treatment of them, for by far the greater number of these cases are of catarrhal origin, and require local treatment of the nose, as well as carefully prescribed internal medication, for the best results in the management of them.

While my results have been fair with them, I am not an enthusiast regarding the treatment of these cases wholly, by the use of the leaden styles, as intimated by Doctor Wells, but I may say in this connection that with the aid of such remedies as I have been able to select for internal use, and with judicious local and surgical treatment of the nasal cavities, and with the wearing for some months of suitable and properly adjusted styles, I have had but little trouble in rendering these unfortunate patients comparatively comfortable, and without the suffering attending the frequent introduction of graduated probes, or removal of the lachrymal sac, and I trust many others have been equally, or more successful than I have.

It is an unpleasant feature of our gatherings, to feel it incumbent upon one to criticise our associates' work, but I believe Doctor Wells will accept what I say, in the spirit in which it is said,—which I can assure him, is in all kindness, and does not refer to him alone, but to the society as a whole.

It appears to the writer, that the members of this society,—a confessedly homœopathic one,—should be consistent in our work, and in our relations to the public should pose as homœopathic physicians first, and surgeons afterward. In all cases where there is a possibility of remedial measures being of value, and from my experience I believe there are but few conditions where they cannot be prescribed to advantage as adjuvants, in the treatment of most affections which the specialist is called upon to treat.

By neglecting them, I believe we are doing ourselves and patients an injustice, and most assuredly are weakening our cause by blindly following the surgical paths of the dominant school without giving our patients the benefits derived from the administration of well chosen remedies.

DAVID W. WELLS: According to our ruling, what I said about not

sharing in Dr. Beebe's enthusiasm in regard to the use of his style was out of order.

W. H. PHILLIPS: Will you close the discussion, Dr. Wells?

DAVID W. WELLS: I had one case, not reported here, done under general anæsthesia at the request of the physician in charge. It was a long and tedious dissection, with a good deal of blood. I did not feel justified in injecting cocaine in a patient already under ether anæsthesia and so we lost the styptic effect of the cocaine and adrenalin. The local styptic and anæsthetic is the most satisfactory and then the hemorrhage is in proportion to one's failure to follow the technique exactly. If the lachrymal sac is shelled out of its bed there is very little hemorrhage and there is very little pain. Bergmeister (Bermoose?) pays no attention to preserving the periosteum; the dissection should be in the periosteum. It makes no difference if it is stripped from the nasal bone. The lachrymal sac is only moderately adherent to the periosteum. I have never removed the lachrymal gland but once in this series. Only one of these cases had sufficient epiphora to make it necessary.

Homœopathic Application of Tuberculin in Phlyctenular Keratitis.
by R. I. Lloyd, M. D.

J. M. McCLEARY: I have always been very much interested in listening to Dr. Lloyd's papers and have been following his lines of investigations.

In phlyctenular keratitis I have never felt convinced that it was a typical presentation of tubercular conditions. Yet I feel that in some cases it is a decided expression of tubercular manifestations to the eye, as probably the hectic flush is.

I have only seen three cases of p. k. where I felt positive of the aforesaid tubercular influence.

The first was a small girl, about twelve years old, in the Five Points Home's Hospital. They were unable to get family history. The patient's history was recorded as having had large glands in the neck and this p. k. condition for three years previous. The child was given advantage of all the fresh air, pure food and good milk and with all the treatment, she was unable to go into a room anyways lighted at all. Would cry out with agony if her hands or the bandages would be removed from the eye and always chose the darkest corner of the room to stay in, as an aid to protect her eyes from the little light therein. The phlyctenules were large and often disappeared, soon to be replaced by others. There was quite a bit of œdema of the lids, hot, acrid tear discharge, which excoriated all the skin surfaces of the cheek that they came in contact with, producing eczema.

This case looked, in every respect, to me like a typical case of rhus tox. I started in and gave her rhus tox. 2x, then 3x, then 6x, then 30x. But regardless of this seemingly indicated remedy I failed to get the slightest improvement. I changed the remedy to tuberculin on account of the glandular condition and their becoming very large and much

more swollen. To my surprise the eyes began to clean up and inasmuch as their improvement continued I continued with the remedy. I had the satisfaction of having a report from the case two years afterward and examining said case personally. The eye and child seemed as normal as the rest of the children of the home.

Case number two, a young machinist. History of p. k. of one year's standing, complained of trouble before that but I was unable to find or feel assured just what the conditions were. The anterior surface of the entire cornea seemed involved. Phlyctenules were small and numerous and a dense haziness practically covered the cornea of both eyes. The light affected the patient so extremely that he not only wore regular gauze eye pads, but also a heavy black silk handkerchief folded up and a bandage over that. I examined the boy's lungs and glands of the neck. There was a history of a tubercular mother and a tubercular brother and sister, dead. I immediately prescribed tuberculin, but seemed to aggravate the case at first. Then I used locally, high frequency over O. U., twice per week and still continued the tuberculin. This case entirely cleared up in about three months and I have had the pleasure of watching this said case for the past four years without the slightest sign of an attack.

Third case, married woman, about thirty-five. Severe attack of p. k. o. s. Pain excruciating. Some iritis, edge of upper lid quite œdematous. Both bulbar and palpebral conjunctivitis. Severe pains extending round and behind o. s. Prescribed spigelia anthelmia 1x, then 2x. No relief. Then I prescribed arsenicum album 3x and 6x. No relief. The patient stated that she got much relief from heat. I prescribed mag. phos. 1x, then 3x. Still no relief. Then I gave patient aspirin. Relieved pain, but still failed to get any relief of condition. About this time I noticed the glands of her neck were becoming enlarged and knotty and learned from the family physician of two miscarriages and of his suspicion of a tubercular condition. I remembered the two previous cases and decided to try tuberculin. Kept the patient on this remedy for about three months and results were as fine and as satisfactory in this case as in the other two.

I have seen quite a number of p. k. cases since, but have not felt that they were associated with tubercular conditions and therefore have not followed up giving tuberculin a thorough test in every case of p. k.

ELLA G. HUNT: Speaking of old books, twenty-two years ago Burnett wrote his account of the successful treatment of tuberculosis, especially tuberculosis in its earlier stages with a preparation "Bacillin." Among his cases was a case of "tubercular affection of the eye," probably phlyctenular keratitis, cured by his preparation of tuberculin.

In the use of tuberculin Burnett's idea of the association of eczema, and repressed eruptions, as cases especially applicable to its use—is rather interesting, especially in reference to Horner's theory of the relationship of eczema and phlyctenular conjunctivitis.

Case No. 3 of Dr. Lloyd's is one where tuberculin would have been suggested to Burnett.

Libre's researches seem to point to the tubercular origin of phlyctenular conjunctivitis, as also do the good results following the use of guaiacol ointment.

The synonyms of phlyctenular keratitis and conjunctivitis as given in the text books, scrofulous, lymphatic or strumous conjunctivitis, herpes conjunctivitis, give an indication of its possible cause, as well as most pronounced concomitant symptoms. It may be due to a special germ, but the general condition of the system and the state of nutrition seem to be an important if not its prime cause. More often than the other diseases of mal-nutrition does scrofula and tuberculosis manifest itself in the form of phlyctenular conjunctivitis, especially in children, but the appearance of a vesicle on the conjunctiva must not be taken for a certain indication of tuberculosis, for we often find them during a temporary lowering of the nutritive powers. Still, the appearance of these phlyctenules on the conjunctiva can be accepted as a certain sign of faulty assimilation or a generally impoverished condition of the blood.

It would seem that phlyctenular conjunctivitis in some instances is due to some derangement at the nerve centers like that causing herpes-zoster. I have seen cases in nurses, especially where the nurse is one of the family and is worn out by watching and anxiety or during the menstrual period; here one or two phlyctenules make their appearance and soon disappear like "fever" blisters on the lips. I noticed quite a number about two years ago in connection with influenza and frontal sinus complications. These I attributed to infection from the nasal cavities.

I think these cases of Dr. Lloyd show the all importance of taking stock of our cases, as a whole, and not only from the viewpoint of the eye. By all means think of tuberculin in all obstinate cases of phlyctenular conjunctivitis with a tubercular history.

The City of Cincinnati has at its Branch Hospital a separate department for tubercular children, where incipient and early cases are treated. Here they have their out-door school. In the Children's Hospital on Mt. Auburn, Cincinnati, also, we have a large percentage of tubercular affections. Reports from these hospitals show that many children suffer with phlyctenular conjunctivitis on entering the hospitals, but the attacks become rare when general nutrition has been improved; cultures from the eye have not been taken. One of the most obstinate cases of phlyctenular conjunctivitis was in a colored girl with marked enlargement of the submaxillary glands.

In children any injury to the cornea has a strong tendency to appear in the form of lymphatic cellular infiltrations. In strumous cases the marked insufficiency of the vascular and lymphatic capillaries predispose to lymphatic stasis, eruptions, glandular enlargements and lesions of mucous membranes. My opinion is that the general condi-

tion rather than the tubercular infection per se is the cause of the disease although very often it is associated with tuberculosis.

G. A. SUFFA: Does the writer claim that the tubercle bacillus can be found in the phlyctenular discharge or does he mean that they are merely supposedly tubercular in origin?

ELLA G. HUNT: The tubercle bacillus has never been found there, as I understand it.

G. A. SUFFA: Ordinarily phlyctenular keratitis does not last long, but you do come across cases that do last a long time and those are probably tubercular in origin. I remember one case ten years ago in a young woman twenty-four years of age. Blebs would come on the cornea and would break. The photophobia and pain was something terrific. The bleb would then heal slowly and others would come. We finally got to a point where I had to do something and I operated upon her. She finally some time after, died of general tuberculosis. I know of another case at present; I think that the serum treatment is being tried upon that case. Her cornea is three-quarters involved in the trouble; she has had it before in spells. Atropine has been kept in the eye for two years. She has been tested for tuberculosis and gave a positive reaction. No signs could be found in the lungs by physical examination. There is a history of tubercular trouble in the family. These are the only two cases that I can recall as strictly tubercular and I do by any means believe that all cases of phlyctenular keratitis are tubercular in origin.

I desire to express my appreciation for the thorough and excellent manner in which the author has presented this subject. I have never found it necessary to remove a lacrymal sack, probing with a No. 5 to 8 Bowman probe if possible without slitting the canaliculus, and syringing freely with a specially made four ounce syringe having a separate bulb pointed tip about a No. 5 size, so that it can be introduced into the duct beyond the stricture, and the duct thoroughly flushed with boric solution has answered; during the flushing the tip is gradually raised as the syringe proceeds so that all mucus and clots are removed. Several ounces of boric solution should be used, especially if there is free bleeding.

G. A. SHEPARD: I have followed one thousand cases of phlyctenular keratitis and I am unable to agree to the proposition that they are all or even any considerable proportion of them tubercular. People differ in their power of resistance to infections of all kinds, and in their resistance to particular kinds. The power of resistance is affected by heredity and is modified by environment. When a patient yields to tubercular infection it shows that they are weakened to infections in general and hence the blebs and vesicles take hold when if the resistance was stronger they would not. This does not show that phlyctenular keratitis is tubercular but only that tuberculosis weakens the resistance and allows them to take hold. To say that all phlyctenular cases of keratitis are tubercular is unwise. Keratitis in tubercular people dif-

fers from ordinary cases in being more persistent and the patient is not an eye patient but one suffering with constitutional disease with the eye trouble as a complication.

W. M. MUNCY: I feel very much the same as Dr. Shepard upon this question. To state that all cases of phlyctenular conjunctivitis are tubercular is too all inclusive. I prefer Prof. Fuch's nomenclature of conjunctivitis eczematosa, as he considers it a conjunctival affection analogous to eczema of the skin. The corneal manifestations are by continuity; being confined mainly to the first layer, also conjunctival. I have had a number of cases, having had previous attacks of eczema, when the conjunctivitis being cured had to return to their general practitioners for treatment of the returned eczema. When finally local afflictions of high frequency and both dietetic and internal medication was advised with perfect results.

We all know that eczematous history is the rule rather than the exception in these cases. Therefore unless we wish to bring eczema also under tubercular manifestations we should hesitate in pronouncing all phlyctenular cases as such.

HERBERT D. SCHENCK: The discussion of vaccines and the internal administration of tuberculinum recalls the case of a child 9 or 10 years of age whose father died of tuberculosis before she was born and whose mother evidently contracted the disease and succumbed before the child was a year old.

Over two years ago she began to have superficial ulceration of the cornea, almost central, with little vascularity, but with considerable photophobia and lacrymation. She was found to react to vaccine, and has been given tuberculinum with great persistency. With the internal administration of this drug have been added at different times first leucodescent lamp, high frequency current, x-ray flashes and nasal tamponades. Each of these was carried out from six weeks to three months, the ulcers having healed at different times and the eye being fairly clear for several weeks, only to have a recurrence develop in one or both eyes. At the present time she is just recovering from one of these attacks. None of these local applications and even the internal administration of tuberculin have greatly benefited the case.

DAVID W. WELLS: In Boston, at the Homœopathic Hospital, outpatient department, we have a routine practice that when a case of phlyctenular keratitis appears it is referred to the laboratory for von Pirquet test. If the test is positive, the patient is put under B. E. (a bacillus emulsion). I do not know whether that differs in its effects from the homœopathic tuberculin or not. I supposed from the title of the paper in which the word "application" is used that we were to have cases treated with the old tuberculin. The dosage would not be very different from ours. It seems to give satisfactory results in doses of the one ten-thousandth of a milligram. I do not know how it compares with the results of the homœopathic tuberculin. In regard to serum therapy in keratitis Roemer goes into the subject ex-

tensively in his recent text book. His conclusions are that serum therapy is not of any great therapeutic value in keratitis.

W. H. PHILLIPS: Have you found the test to be negative in any of your cases?

DAVID W. WELLS: The majority of them are positive. The best authorities claim now, I believe, that the test is of value in adults, only when it is negative, but no conclusions can be drawn by a positive result because all adults give a positive reaction.

W. M. MUNCY: What preparation of tuberculin do you use in the Boston Hospital?

DAVID W. WELLS: We use the old tuberculin emulsion; I do not know how it compares with the homœopathic preparation; it seems to me to have the advantage of a very definite dosage.

W. H. PHILLIPS: Shepard and Rumsey will have to change their ideas of phlyctenular keratitis. Reports from large clinics from all over the world tend to verify the claim that children with phlyctenular keratitis invariably respond affirmatively to the tuberculin test. It is further recognized that an affirmative test in a child is pretty good evidence that an existing pathological process is of tubercular origin. This in connection with the fact that these children regularly respond well to tuberculin treatment seem to me pretty good evidence that phlyctenular keratitis is of tubercular origin. I have found the bacillus emulsion a most satisfactory remedy, combined, of course, with fresh air and right diet. In answer to Dr. Wells' question Dr. Watters in his paper makes the statement that the ten-thousandth of a milligram is about equal to our seventh or eighth decimal.

Edema of the Eyelids in Children.—In discussing various difficulties of diagnosis encountered in children, the author calls attention to the fact that there are four conditions in which this symptom may be met with. The first two are chronic nephritis and the rare cases of congenital edema of the lids. The condition is also an early symptom of rheumatic pericarditis. In fact, it often appears before any other sign, unless it be an increase in the rapidity of respiration. In the three conditions just mentioned the edema is more marked in the upper eyelids, but in a fourth condition, whooping cough, it is more often in the lower lids. As it appears sometimes before the cough it may be of assistance in the diagnosis. The author tells of the case of a boy brought to him because of loss of appetite, and who had no cough, but exhibited the symptoms above mentioned; a week later he developed the characteristic whoop.—Thursfield, *Birmingham Medical Review*, Birmingham, England.

For laryngeal edema tracheotomy may be necessary should local applications of pituitary, adrenal or cocain preparations fail to give prompt relief.

ADENOIDS; THEIR PATHOLOGICAL POTENTIALITY; THEIR REMOVAL.*

CARL H. RUST, M. D.,

Cleveland, O.

IN 1868 Mayer called attention to the marked influence adenoids possessed in causing deafness.

Adenoids are frequently found in connection with suppuration of the middle ear.

In those cases where there is an excessive amount of adenoids present, we may find in the nasal passages congestion, relaxation and infiltration of the tissues; partly due to the interference with the circulation and partly to the lack of the stimulatory effect of the atmospheric pressure. In some cases one may also find the typical facial changes mentioned by all writers on the subject.

These facts are known to all of you and need no elaboration, so I will devote my remarks to that part of my subject which deals with the relation existing between adenoids and the irregularities we find in children's teeth.

An excessive amount of adenoids will cause mouth-breathing. Mouth-breathing must in some cases be considered a factor in the cause of irregular teething; the altered position of the tongue may have a great deal to do with the narrow development of the superior maxillæ.

Some investigators are very positive that mouth-breathing causes narrowed arches on account of the muscular tension, but in reality the muscles are relaxed and not tense.

Thumb-sucking will not produce a general contraction, for all of these structures are made for sucking, and the temporary effect upon the teeth is soon remedied, sometimes with no treatment whatever, if the habit be stopped.

A thumb-sucker is not a mouth-breather and has a very small amount of adenoids.

In a great many cases the habit of mouth-breathing ceases as soon

*Read before the Hom. Med. Soc. of Ohio, May 14-15, 1912.

as respiration is re-established through the naso-pharynx; in others the dental correction must be made before good results are attained.

I can positively state that a large number of serious irregularities exist, in which the nasal space is practically sufficient, and neither mouth-breathing, adenoids nor diseased tonsils are present.

A child may develop facial deformities and deficiencies of any of its immediate ancestors. In a great many cases the tendency to irregular teeth is inherited, exactly the same as nasal spurs. I have removed from father and son spurs exactly alike in size, shape and location.

These inherited conditions may be aggravated by malnutrition, developed in utero in the majority of cases. In most of these children I have found a history of malnutrition showing itself in the first few weeks of life.

The thumb-sucking is an expression of inability to get the necessary nutrition from the food, and he is still searching for it. This becomes a habit which may be carried on for years, one case was still sucking her thumb at the age of twenty-five years. There are cases where thumb-sucking is merely in imitation of other children, but even in these cases there is a probable deficiency.

My experience teaches me that adenoids always express a constitutional deficiency and I am sure the great majority of these cases of irregular teething express the same thing.

Various pre-natal conditions are responsible, but I do not think we appreciate the great part played by gonorrhœa, syphilis and tuberculosis in causing this underlying dyscrasia.

Therefore we have a constitutional deficiency developing in utero and in some cases standing alone; in others this deficiency is engrafted on an inherited irregularity which of itself might have been of small moment, but when augmented by the underlying malnutrition soon expresses itself in thumb-sucking or adenoids and mouth-breathing. A condition has now developed which demands the best efforts of the internist, the rhinologist and the orthodontist, and to get results they must understand each other and work together.

At the four periods of molar eruption, two, six, twelve and seventeen years, we are very sure to have enlargement of the tonsils and adenoids which will return to normal after the eruption of the teeth. I do not doubt that a great many unnecessary operations have been performed at these periods.

These secondary infections take place through the lymphatic system.

A rhinitis will cause an infection of the cervical glands. A blocking of the cervical glands will cause an inflammation of the oral and pharyngeal tonsils.

As some children are born with adenoids so large that they are unable to take their nourishment in the natural manner, the condition must have developed in utero. These are exaggerated cases of this same condition. In many cases it is so slight as to escape notice and that period passes in which a little medication would do the greatest good. Later the child is taken to the physician with a fully developed case and it must be analyzed with great care if he would get results. He should not inform the parents that the child will out-grow it. A careful study of the researches into the distribution of the lymphatic system will give us a better understanding of these cases, including that dangerous type, Status Lymphaticus.

To successfully treat these conditions, we must carefully study the patient, not the adenoids.

We must inquire into the condition of the child at birth; its food; the various derangements of digestion; diseases of childhood and conditions resulting therefrom. Also the condition of the mother during pregnancy and a history of both father and mother in regard to adenoids, tonsils, enlarged glands, tumors and skin diseases. With the assistance of this history the appropriate remedy can be given.

The removal of adenoids should not be considered a cure. After the surgical treatment the remedy indicated by a careful study of the patient should be given.

862 Rose Building.

DISCUSSION.

DR. L. K. MAXWELLS, Toledo: I would like to discuss one point of Dr. Rust's paper, and that is the danger in connection with status lymphaticus. That is a condition which is not appreciated by physicians at large, and we only learn to appreciate it by the accidents that occur in connection with the surgical treatment. A year ago last November I had prepared to operate on the tonsils and adenoids of a boy four and a half years old, whom I had circumcised about eight months previously under chloroform anaesthesia with absolutely no unpleasant effect. For about four or five weeks he had had a severe spasmodic cough resembling whooping cough, and about six months before that he had had an attack of glandular trouble, all the lymphatic glands being implicated, and he ran a very high temperature. Inasmuch as an internist and throat specialist had advised operation, I had him in the hospital, and he had taken perhaps thirty drops of the anaesthetic,

which was chloroform, and contra-indicated in this condition. He had inhaled perhaps thirty drops, not over, the nurse said, and I was ready to begin my work, when he stopped breathing, the heart stopped acting, and we worked for two hours, but were unable to resuscitate him. We tried artificial respiration, and could hear the air going in and out, but could get absolutely no response from the heart.

I immediately began to look up the literature on this subject and found that it was very meager. A friend sent me an article in which he maintained that an almost absolute diagnosis could be made by the use of the X-ray. Thereupon I wrote to between two and three hundred X-ray specialists in this country and in Europe. I received about one hundred and twenty-five replies, and of these only about twenty-five had ever done any work for diagnostic purposes along this line.

The condition is one which is not easy to diagnose, but it covers a large range in life. It may attack those early in life, and we have had cases as late as fifty-five years in which a condition of status lymphaticus existed and was the cause of death. It is prone to come in connection with diseases of the thyroid gland, and if there is great enlargement you may possess the ability to diagnose through auscultation or percussion, or by means of the X-ray, but if it is enlarged antero-posteriorly, diagnosis by means of the X-ray is absolutely impossible, so Lang, of Cincinnati, says. One must be governed by the clinical picture entirely. We are working in the dark, and must use the utmost care in the surgical treatment of this class of cases.

Poisoning with Naphthalene.—Prochoronik prescribed 0.25 Gm. of naphthalene, four times a day, for a boy six years old suffering from oxyuria. After seven doses, the patient began to vomit and became stuporous and restless. The pulse was 100, strong, and the spleen was distinctly palpable. Castor oil and an enema were ordered, but on the following morning there was a decided change for the worse and jaundice appeared. The urine was scanty and loaded with albumin. There was absolutely no reaction to stimulants; respiration and heart action became progressively worse and soon death set in. At the autopsy a persistent thymus and cloudy swelling of the organs were found. The dose given in the text-book varies from 0.05-0.5 Gm. It is possible that in this case there was an idiosyncrasy towards the drug or that the castor oil did not act sufficiently so that a relatively large amount of naphthalene was dissolved and absorbed. The author concludes that it is advisable to employ some less harmful drug in the treatment of oxyuria.—*Therap. Monatshft.*

SOCIETIES.

THE TWENTY-FIFTH ANNUAL CONVENTION OF THE AMERICAN HOMŒOPATHIC OPHTHALMOLOGICAL, OTOLOGICAL AND LARYNGOLOGICAL SOCIETY, HELD IN MEMORIAL HALL, PITTSBURGH, PENNA.,
JUNE 17TH, 18TH, 19TH, 20TH AND 21ST, 1912.

The first session of the twenty-fifth annual meeting of the American Homœopathic Ophthalmological, Otological and Laryngological Society was formally opened by President Geo. A. Suffa at 3 P. M. on Monday, June 17th, 1912. On motion of R. S. Copeland, duly seconded and carried, the printed program was adopted as the order of business of the meeting.

The President appointed the following committees:

Attendance.—J. R. McCleary, J. B. S. King.

Press.—Burton Haseltine, W. C. Cook.

On motion of R. S. Copeland, duly seconded and carried, the President's Address was made a special order of business for 8:30 P. M. Tuesday.

E. J. Bissell moved that papers whose authors were absent be read by title only, unless it should happen that the business of the society should get ahead of the schedule, when such papers could be read at the pleasure of those present.

R. S. Copeland moved to amend the motion of Dr. Bissell so as to read those papers whose discussers were present, although the authors were absent, be read by the Secretary. Seconded. Carried.

Paper No. 6½, "Intra-Ocular Tumors," by J. K. M. Perrine, Pittsburgh, Pa.

Paper No. 6, "Tonsillotomy versus Tonsillectomy," by Chas. E. Teets, New York.

Paper No. 4, "Adenoids or Troubles in the Naso-Pharynx," by W. E. Reiley, Fulton, Mo.

Adjourned.

SECOND SESSION—TUESDAY, JUNE 18TH, 1912—2:30 P. M. TO 6:00 P. M.

Meeting called to order.

Minutes of the previous meeting read and approved.

PRESIDENT: The business of the afternoon is a Symposium on

Aural Suppuration. Dr. I. O. Denman, of Toledo, has the Symposium in charge.

I. O. DENMAN: Does the action taken yesterday, in regard to papers by absent authors being read by title only, apply to this Symposium as well? I should like very much to have all these papers read (there are only five of them) in order to make a complete presentation of the subject.

PRESIDENT: My ruling on that point is that it does not apply to the papers in the Symposia. Before the Symposium is opened I would like to announce that all the ex-Presidents of the Society will meet after the evening session to nominate officers for the coming year.

I. O. DENMAN: What is the preference of the members about discussing the papers? Shall we discuss each paper after it is read or discuss the subject after all of them have been read?

C. GURNEY FELLOWS: I move that the discussion be after all the papers have been read. Seconded. Carried.

Paper No. 7, "Pathology of Aural Suppuration," by H. P. Bellows, Boston, Mass.

Paper No. 8, "General Therapy of Aural Suppuration," by J. A. Campbell, St. Louis, Mo.

Paper No. 9, "Surgical Treatment of Middle Ear Suppuration," by Burton Haseltine, Chicago, Ill.

Paper No. 10, "Labyrinthine Suppuration," by Geo. W. MacKenzie, Philadelphia, Pa.

Paper No. 11, "Intra-Cranial Complications," by C. C. Collier, Chicago, Ill.

Adjourned.

THIRD SESSION—JUNE 18TH, 1912—8:00 TO 10:00 P. M.

Meeting called to order at 8:30 P. M.

First Vice-President W. H. Phillips called to the chair while the President read his address.

President's Address.

Vice-President appointed as Committee on President's Address E. J. Bissell, Chairman; H. B. Bryson, Burton Haseltine.

Symposium: Glaucoma, A. E. Cross, Chairman, Worcester, Mass.

Paper No. 12, "Pathology of Glaucoma with Demonstrations," by Frank O. Nagle, Philadelphia, Pa.

Paper No. 14, J. Iviniey Dowling apologized for having no paper

ready and said: I have two interesting cases which corroborate the view I hold that the ethmoid region has something to do with the causation of glaucoma. I think also that diseased turbinals may have something to do with the ordinary case of glaucoma. The question of heredity also comes up as a factor in the causation of this disease. In one of the cases I have in mind the parents are glaucomatous and the child has phlyctenular disease. We will have to study the subject for some generations before we can be sure of it. I call to mind one young woman, whose mother is blind from glaucoma, had a rapid increase of hyperopia, although the visual field was normal.

The daughter presented so many symptoms that were similar to those of the mother and were so suggestive of glaucoma coming on, that I thought it might be a good thing to open up the ethmoid cells, which I did. I do not believe that now she will ever develop glaucoma, also having, as she has, my special treatment with tampons.

Paper No. 15, "Some Observations in Glaucoma with Schiotz's Tonometer, with Clinical Demonstrations," by E. J. Bissell, Rochester, N. Y.

Paper No. 18, "The Operative Treatment of Glaucoma with Special Reference to the Value of the Substitutes for Iridectomy," by I. O. Denman, Toledo, O.

Adjourned.

FOURTH SESSION—JUNE 19TH, 1912—10:00 TO 12:00 A. M.

The President called the meeting to order at 10:00 A. M.

The first order of business was the Report of the Secretary, Dean W. Myers.

To the American Homoeopathic Ophthalmological, Otological and Laryngological Society:

Your Secretary has little to report. For some unknown reason the work of getting the program together seemed to drag unusually this year. A few of the papers were in on time, a large number of them came at the last moment, several even after the program was in the hands of the printer. It was waiting for some of the delayed subjects to arrive that kept us out of the Institute program altho Dr. Horner held up his program until the last moment.

The transactions were published and delivered in April, and it seems, under the present arrangements, that this is about as early as we can expect to deliver them to our members, particularly, when we have programs of the length of last year's and this.

Abstracts of all papers received in time were sent to the publishers of the Journal and reprints of the same are here for distribution.

In publishing the list of members we have tried to correct all errors in addresses, but, as usual, there are some mistakes and your coöperation is asked in making them correct.

Asking your indulgence for all delinquencies, particularly, typographical errors, which mar our otherwise attractive program, I beg to subscribe myself,

Faithfully yours,

DEAN W. MYERS, *Secretary*.

Accepted.

REPORT OF THE TREASURER, A. E. CROSS.

Worcester, Mass., June 15, 1912.

Report of the Treasurer of the American Homœopathic Ophthalmological, Otological and Laryngological Society for the year ending June, 1912:

Receipts.

Reported balance on hand, Narragansett Pier,	
June, 1911	\$432.77
New Members, initiation and dues	58.00
Dues, Old Members	531.00
From Sale of Book, Reproving of Belladonna..	95.00
	<hr/>
	\$1,116.77

Expenditures.

1. Expenses of Secretary, Dean W. Myers, 1910-1911, Including Stenographer, Printing, Postage, Stationery, etc.	\$52.85
2. Expenses of the President, Burton W. Haseltine, Including Stenographer, Printing, Postage, Stationery, etc.	44.50
3. J. B. S. King, Services of Official Sten- ographer	100.00
4. Wm. M. Muncy, Expenses of Meeting at Narragansett Pier	9.87
5. Journal of Ophthalmology, Otology and Laryngology	20.00
6. Chas. L. Clark, Printing, Stationery, etc., for Treasurer	10.75

7. Frost Stamp & Stationery Co., Rubber Stamps for Treasurer	1.73	
8. Howard P. Bellows, Payment of Appropriation on Account of Reproving of Belladonna	300.00	
9. Howard P. Bellows, Expenses of Express and Mailing Copies of Reproving of Belladonna	8.95	
10. Dean W. Myers, Secretary, Printing, Postage and Stenographic Services, 1911-1912	52.60	
11. Albert E. Cross, Postage, Printing and Stenographer	35.60	
	<hr/>	636.85
Balance on hand		\$479.92
Assets:		
Cash on Hand	\$479.92	
Dues in Arrears	263.00	
Due on Account of Sale of Belladonna	20.00	
	<hr/>	
Total Assets		\$762.92
Liabilities:		
Journal of Ophthalmology, Otology and Laryngology	\$20.00	
Achey & Gorrecht, Expenses of Transactions, Printing, Approximately	200.00	
	<hr/>	
Approximate Liabilities		\$220.00
Total Membership	202	
Resignations to Present	4	
Reported Deaths During the Year	4	
Members in Arrears	57	
Back Dues Owing	\$263.00	
29 Members Owing Each	3.00	
17 " " "	6.00	
8 " " "	9.00	
1 " " "	2.00	
Members in Good Standing, June, 1912	190	

Respectfully submitted,

ALBERT E. CROSS.

The report was referred to the Auditing Committee. D. W. Wells and W. H. Phillips were appointed on the committee and reported as follows:

REPORT OF THE AUDITING COMMITTEE.

The accounts and the vouchers of the Treasurer have been examined by your committee and found correct.

Report of Auditing Committee accepted.

Report of the Treasurer accepted.

The President added to the Board of Censors H. P. Bellows, G. W. MacKenzie and W. H. Phillips.

REPORT OF THE NECROLOGIST, E. W. BEEBE.

Mr. President: Two of our active members have passed away since our last meeting at Narragansett Pier, one of which, Dr. Gustave A. Mueller, was a resident of this city, and the other, Dr. Geo. Rhoads, of Springfield, Mass. I have been furnished with brief biographies of each by friends who knew them.

Doctor G. A. Mueller was born in Crestline, Ohio; moved to Pittsburgh when a small boy, where he attended the Sharpsburg Academy and later the University of Michigan, and graduated from Hahnemann Medical College, of Chicago, in 1885. He began the practice of medicine in north side Pittsburgh and a short time later was made City Physician, which position he held until 1894, at which time he went abroad and took up post-graduate work at Munich, Vienna, Paris, Berlin and London. Returning to Pittsburgh in 1896, he began practice in Penn Avenue as a specialist.

He was a conspicuous figure in the management of the Homœopathic Hospital, a member of the Executive Committee, the Board of Trustees of the hospital and of the medical board of his department.

He served four terms as a member of the State Board of Medical Examiners and was but recently appointed to a fifth term by the Governor.

He was a member of the American Institute of Homœopathy, the Homœopathic State Society of Pennsylvania and of the Homœopathic Medical Society of Allegheny County. He had been a former president of the latter society. He was also a member of the Pittsburgh Training School for Nurses, a member of the American Homœopathic Ophthalmological, Otological and Laryngological Society, the East End Doctors' Club, the University and Duquesne Clubs, the Oakmont

Country Club, the Sportsman's Association of the Cheat Mountain and also a member of the Alumni Association of Hahnemann Medical College.

Doctor Mueller was a Mason and had filled all the offices in the local lodge of Odd Fellows, and was a representative of the Grand Lodge.

He was Medical Director of the Odd Fellows' Endowment Association.

He was a member of the Presbyterian Church and one of the incorporators of the Bank for Secured Savings.

Doctor Mueller passed away February 9th, 1912, aged forty-nine years, his death being due to ether toxæmia.

He is survived by his widow, Nell A. Mueller, and two sons, Robert S. and Gustave A., Jr.

DR. GEORGE RHOADS.

Dr. George Rhoads was born in Richmond, Vermont, son of Cornelius Rhoads, a farmer. His education was obtained at the home district school of that town, finishing at the Goddards Seminary in Barre, Vermont.

His first year in the study of medicine was passed in the University Medical School at Burlington, Vt., after which he entered Hahnemann Medical College, of Philadelphia, receiving his diploma in April, 1889. He first located in Fitchburg, Mass., where he engaged in general practice, and removed to Winderdon, Mass., after a few months and took up the study of eye and ear work, which was followed with a special course in the New York Ophthalmic College Hospital.

He moved to Springfield in 1893 and engaged in special practice, in which he was unusually successful, and which brought him patrons from far and near, often taxing his physical capacity to the utmost.

He was married to Miss Harriet Barney, of Springfield, September 22d, 1896, who survives him; also his son, Cornelius, aged twelve years, and an adopted daughter, Mary, six years old.

Doctor O. W. Roberts, an intimate friend of Doctor Rhoads, and to whom I am indebted for this sketch of his life-work, has this to say of him: "In the death of Doctor George Rhoads, Springfield has met with a great loss, for he was in all ways a *man*. Homœopathy has lost a strong friend and a very persistent worker. His specialty has lost one of the very best."

For several years he has suffered from attacks of indigestion and from a peculiar form of headache, greatly to his annoyance.

On the morning of March 28th, 1912, he arose from his bed, having passed a restless night from the above-named causes, but was obliged to return by reason of severe suffering. He recovered somewhat from this, but died very suddenly on the afternoon of the day following, the autopsy showing aneurism of the aorta with perforation to be the immediate cause of his death.

Report accepted and the Secretary instructed to apprise the family of the action of the society.

Moved that the Necrologist be instructed to get data and incorporate them in a notice of the deaths of Geo. C. Haller and H. S. Barnum, to be published in the official journal and the action sent to their respective families. Carried.

PRESIDENT: We will now have the report of the Censors if they are ready.

The Censors presented the following names for membership as having filled all the requirements of the By-Laws:

S. B. Moon, Pittsburgh.
D. L. Martin, Dorchester, Mass.
C. A. Harkness, Chicago, Ill.
W. H. Williams, Middletown, N. Y.
H. W. Champlin, Tonawanda, Pa.
H. B. Bryson, Pittsburgh, Pa.
W. L. Rhonehouse, Ann Arbor, Mich.
F. B. MacMullen, Ann Arbor, Mich.

Moved that the Secretary be instructed to cast one vote for the society electing those named to membership. Seconded. Carried.

The Censors reported that the application of C. N. Shellenberger was in their hands with the dues but without endorsement.

Moved that he be elected, subject to the approvement of two members who knew him. Seconded. Carried.

The following resignations were read:

W. B. Winchell, Brooklyn, N. Y.
H. A. Harrison, Utica, N. Y.
John Storer, Chicago, Ill.

Moved that the resignations be accepted. Seconded. Carried.

The resignation of Earl E. Woodward was also in the hands of the Censors, but as his dues were not paid up, it was moved that his name be dropped. Seconded. Carried.

H. P. BELLOWS: No motion is necessary; it is dropped automatically.

G. A. SHEPARD: I have a letter from Dr. Strong stating that he is more or less discouraged with life. I know that he is a good fellow, but he does not attend because he cannot afford it. Had he better be dropped? It is a good thing to bestow a little courtesy on such.

H. D. SCHENCK: In a case like that I think that it would be a wise mode to remit the dues and accept his resignation. Seconded.

BURTON HASELTINE: Make a proposition to him that if he pays his dues for the coming year he will be retained.

H. D. SCHENCK: I accept Dr. Haseltine's suggestion, giving the Treasurer power to continue membership if so desired.

H. D. Schenck's motion, with Burton Haseltine's amendment, carried.

TREASURER: H. H. Jewel writes that owing to continued sickness in his family he would like to be continued for three years' dues. Allowed by motion.

Moved that the By-Laws be allowed to take their course with all other names in arrears. Seconded. Carried.

PRESIDENT: The Committee of Ex-Presidents on the Election of Officers is ready to report I believe.

BURTON HASELTINE: The committee offers for your vote the following officers for the coming year:

President, Geo. A. Shepard, New York City.

First Vice-President, I. O. Denman, Toledo, O.

Second Vice-President, Ella G. Hunt, Cincinnati, O.

Secretary, Dean W. Myers, Ann Arbor, Mich.

Treasurer, A. E. Cross, Worcester, Mass.

Necrologist, E. W. Beebe, Milwaukee, Wis.

Censors, J. Ivimey Dowling, Albany, N. Y.; Wm. Muncy, Providence, R. I.; G. J. Palen, Philadelphia, Pa.; Robert M. Jones, New York; J. B. S. King, Chicago, Ill.

Moved that the Secretary be instructed to cast the ballot of the Society for the names as read. Seconded. Carried.

Report of the Committee on Attendance:

	<i>Members.</i>	<i>Visitors.</i>	<i>Total.</i>
First Session	25	12	37
Second Session	42	12	54
Third Session	36	6	42
Fourth Session	20	4	24

E. J. BISSELL: The Committee on the President's Address is ready to report.

PRESIDENT: Yes, we will have that now.
(Address published in July issue.)

REPORT OF THE COMMITTEE ON THE PRESIDENT'S ADDRESS.

Your committee desires first to express its appreciation of the President's scholarly address and especially to commend the position as to the need for constructive work in the homœopathic school. We feel that such expressions from our President carry added weight in view of the well known contributions that he himself has made to the science and art of ophthalmology.

We agree with him that this Society should actively assist in improving the standard of medical education and in promoting research work along special lines. We endorse his idea as to national regulation of medical education, but we believe that a subject of such scope can be more adequately handled by the American Institute of Homœopathy than by a society such as our own.

We are impressed with the importance of what Dr. Suffa says as to the economic status of the medical practitioner, and we believe that it is one of the proper functions of societies of this kind to take up and to consider all such questions affecting the business and material success of its members.

The committee wishes, on behalf of the society, to thank Dr. Suffa for his splendid address and for the highly successful work during his entire term of office.

(Signed.) E. J. BISSELL.
BURTON HASSELTINE.

NINTH SESSION—FRIDAY, JUNE 21ST, 1912—10:00 A. M. TO 3:00 P. M.

Clinic at the Homœopathic Medical and Surgical Hospital, Pittsburgh, Pa.

Report of H. Ballou Bryson, Chairman Clinic Committee, Pittsburgh, Pa.

The material assembled, and at the service of the operative clinic, held at New Homœopathic Hospital, Pittsburgh, Pa., June 21, 1912, by the O., O. and L. Society, included the following cases:

Patients.

Hypertrophied Tonsils and Adenoids	12
Deflected Septa	5
Cataract	7

Strabismus	2
Dacryocystitis	2
Pterygium	1
Ptoxis	1
Tumor of Lid	1
Entropion	1
Cleft Palate	1
Corpus Alienum in Esophagus	1
Detachment of Retina	1

—
35

It is to be much regretted that so few members of the Society remained to participate in the actual work of this clinic,—unfortunately held on the last day of the meeting,—or to see the exceptional work done in this clinic. Much of the work done was along lines or by methods never before shown or employed by operators at the Society's clinic. For this demonstration of new methods the Society is under obligation to Drs. D. W. Greene, of Dayton, O.; Harold Foster, of New York, and Geo. L. King, of Alliance, O. Dr. Greene admirably demonstrated the Smith operation for removal of the lens in its capsule. He is the most experienced operator in America in this particular operation, and those who saw his technique, so deftly executed, were most fortunate. Dr. Greene operated on four cases,—one mature, having had preliminary iridectomy; one mature, not having had preliminary iridectomy; one immature, nuclear cataract ($v = 20/100$) not having had preliminary iridectomy, and one case of posterior polar cataract,—thus giving us a variety of cases and enabling us to form better estimates of the range and results of this inter-capsular extraction. Final results will be reported later.

Dr. Harold Foster demonstrated the 'finger enucleation of tonsils on ten cases,—twenty tonsils,—and proved his method to be easily applicable to the large protruding; the fibrous, adherent; the submerged; and the small, friable tonsil. Hemorrhage at the time was notably less than by the dissecting operation; every case healed kindly and without postoperative care, other than the use of an antiseptic wash or gargle,—all were discharged from the hospital thirty-six hours after operation.

Dr. Geo. L. King demonstrated the value of the 'Hays pharyngoscope in diagnosing adenoids; in definitely locating the site and size of the

growth, and furnishing the operator with exact information as to what has to be done. Dr. King demonstrated also his method of removing adenoids under cocain anæsthesia. The patient prone, on the back, has the cocain, 4 per cent., dropped into the anterior nares; after the usual time, the patient, wrapped in a sheet or blanket, if a child, is held on the lap of a nurse or assistant; another nurse or assistant holds the child's head in proper position. Dr. King then deftly inserts the Murdoch mouth gag, and as deftly introduces the Stubbs or other adenoid knife, and guided by the information obtained by the pharyngoscope, locates the knife in proper position, and with one quick stroke removes the entire adenoid mass. Dr. King's method is to be commended for precision, thoroughness, and the least possible disturbance to the patient.

Your Clinical Committee had arranged with Dr. Cevalier Jackson to be present and remove a coin from the esophagus. A radiogram, taken June 18th, showed the coin to be located about six inches below the larynx; but a second radiogram, taken the morning of the clinic day, showed that the patient had been so inconsiderate as to allow the coin to pass into the stomach, and to so deprive the clinic to the rare treat of seeing Dr. Jackson demonstrate both his instruments and his skill.

Dr. Phillips, of Cleveland, did a submucous resection of the septum to the satisfaction of as many as could see the technique.

Dr. Suffa, retiring President of the Society, neatly extracted a mature cataractous lens by the usual method.

HOMŒOPATHIC MATERIA MEDICA AND THERAPEUTICS.

DEPARTMENT EDITOR.

PHILLIP RICE, M. D.,

San Francisco, Cal.

Calcarea Picrica.

HOWARD P. BELLows, M. D., Boston, Mass.

This remedy is little known and seldom used. It appears to have been introduced by the late Dr. H. C. Houghton, of New York, who called it *calcarea picrata*, and writes of it in his *Clinical Otology*:—"Indicated by clinical experience for peri-follicular inflammation. The extreme prostration of picric acid is relieved by this salt also." To this Dr. J. H. Clarke, of London, in his *Dictionary of Materia Medica*, adds:—"Minute and excessively painful boils in meatus. Picric acid and all its salts are curative in states of intense prostration and fatigue."

So far as I know this is the sum total of the literature of *calcarea picrica*. To this I can add, from clinical experience, some suggestions which may be useful to others. After every attack of furuncular inflammation of the external meatus the walls of the canal are left in an abnormally dry condition, because the ceruminous and other secreting glands do not at once resume their normal function. To this dryness is sometimes added an unusually irritable condition of the canal walls, with dry scurfy accumulation and exfoliation of epithelial scales. The condition reminds one of eczema, but in addition to itching and burning has a greater tendency to pain than is characteristic of eczema, and rests upon a furuncular basis. One would naturally think of arsenicum or graphites in this condition, but I have found *calcarea picrica* preferable to either. This condition of irritability of the canal walls, following furuncular inflammation, is associated in my mind with a somewhat analogous condition of the skin of the auricle which sometimes follows frost-bite. This condition is characterized subjectively by intense burning, rather than by itching or pain, and, in my experience, is best met by *agaricus muscaris*.

In one case the patient, a refined lady of middle age, had a chronic affection of the external meatus, resting upon a furuncular basis, which

was similar to the condition above described during its acute exacerbations, which for some years had recurred every few months, but which never wholly subsided. A single prescription of *calcareo picrica*, in the sixth decimal attenuation, two to four doses daily, corrected this condition entirely in the course of a month, and there was no recurrence. From time to time for some years afterwards this lady, when I happened to meet her, would refer with gratitude to the action of this remedy and the relief which it afforded her. In nearly thirty years' experience I have never met the same condition again in a chronic form, but should I do so my first thought would be of *calcareo picrica*.

Kali Bichromicum.

PHILIP RICE, M. D., San Francisco, Cal.

Acute inflammatory processes characterized by severe swelling, intense redness and stony hardness, with little or no tendency to suppuration calls for this remedy. No remedy equals this for *intense engorgement* of the parts involved. Let it be an active rhinitis and we will find a high degree of swelling and hardness of the mucous membrane and a degree of stuffiness that is most distressing. A tonsillitis will exhibit violent swelling, bright redness and stony hardness of the tonsil and peritonsillar tissue with little or no suppurative tendency. Pain will be intense and swallowing quite impossible. The pain will shoot up into the ear. The saliva will be stringy and apparently profuse, running out of the half open mouth. But it is in reality not profuse as we find it in a mercury condition; the inability to swallow causes the saliva to accumulate and run out of the mouth. Stringy and fibrous secretion is a well known characteristic.

The typical *kali bichromicum* temperament is the sanguine-vital. Unless deeply diseased this individual will be a clean, wholesome, and vigorous person. This, in a large measure, explains the intensity of the inflammatory process.

To illustrate:—Case I. A typical sanguine-vital temperament; blue eyes, light hair, clear and fair skin; round face and body, full chest. Has had repeated attacks of tonsillitis; on a few occasions very slight suppuration, but only after a week or more of intense inflammation and swelling. Saliva apparently profuse and quite stringy. Pain severe and shoots up into ear, < left side. The parts intensely swollen, bright red and as hard as bone. *Kali bichromicum* 12x gave immediate relief and the following night slept without waking. He had had from his

family physician several of the mercury preparations, belladonna and hepar, but without any relief.

Case II. When brought to the office by his family physician the patient had been suffering with a left sided tonsillitis for three weeks. During the early part of the second week the tonsil was incised, but without finding any pus. A day or two later some pus escaped followed by immediate relief. Within a few days, however, there was a return of all the earlier symptoms. The tonsil and peritonsillar tissue again became intensely swollen, red and hard. The mouth was partly open all the time. Talking was practically impossible; could not move either the jaw or tongue during the effort. In temperament he was typically sanguine-vital. *Kali bichromicum* 12x was prescribed and given two hourly. At the end of twenty-four hours he had practically not an abnormal sensation left. Probably one-fourth of the swelling was still present, but this was quite soft and only very slightly red.

Case III. For a year or more this patient had been suffering with frequent colds and more or less constant nasal obstruction which no kind of spray relieved. The cold he had at the time of his visit to me began six weeks before, and was apparently growing worse instead of better. The obstruction to his breathing was quite complete; only during part of the day could he breathe through his nose. The coryza was not profuse, and what little there was was very tough and stringy. The nasal membrane was violently engorged, deep red and very firm to pressure. The eustachian tubes and middle ears had gradually become involved. Marked deafness, fullness and pressure in the ears, with constant roaring noises, and general confusion in the head were some of the general symptoms. The drum membranes along the handle of the malleus and in Shrapnell's membrane were severely engorged. In short, violent engorgement of the mucous membranes of the head characterized the condition. The temperament was like that of the other two cases, namely, sanguine-vital. *Kali bichromicum* 12x was given four times a day for a few days followed by placebo. The ears were opened with the catheter. After the second catheter treatment the tubes opened and remained open. At the end of a week the nasal obstruction was quite entirely removed, and at the end of three weeks has scarcely a symptom left. No local treatment of any kind was applied to the nasal cavities.

CURRENT LITERATURE.

DEPARTMENT EDITORS.

WM. McLEAN, M. D.,
New York City.

FRANK O. NAGLE, M. D.,
Philadelphia.

OPHTHALMIC RECORD. July, 1912

1. Removal of a Spindle-Cell Sarcoma from the Right Orbit. Recovery with Intact Ocular Apparatus, by Frank Allport.

*2. Keratotomy for the Removal of Corneal Scars and Opacities, by G. B. Jobson.

3. Anomalies of Refraction and Their Relation to Abnormalities of Ocular Balance, by S. D. Risley.

4. Thyroid with Arsenic and Its Associated Internal Secretions in Diseases of the Eyes, S. B. Muncaster.

*5. Treatment of Detachment of the Retina, G. C. Savage.

*2. Keratotomy is for improvement of vision where fault is due to corneal scars only, and they, by extent or location, prevent an improvement in vision from an artificial pupil.

Special instruments required are: a small keratome constructed to allow cutting from any direction or angle. A pair of small, angular, mouse toothed fixation forceps, and a small tenaculum. Cocain anæsthesia. Avoid all irritating flushing solutions. Lids separated by speculum and eyeball by thumb and forefinger.

Perpendicular cut made with keratome around opacity to be removed. The abnormal tissue is removed in layers until clear cornea is encountered. The clear cornea encountered must be left intact. Almost the entire depth of the substantia propria may be removed, but Descemet's membrane must not be injured.

Flush eye with a non-irritating solution and apply a cotton dressing wet with boracic solution. Daily dressings should be done.

5. Savage effected an improvement in vision in three cases of retinal detachment by subconjunctival injections of a solution of Sodium citrate, using fifteen minims of a 25 grs. to the ounce solution.

THE OPHTHALMIC REVIEW. July, 1912.

1. Glaucoma Problems (continued), by Priestly Smith.

August, 1912.

1. Colobomata of the Eye, by Beaston Hird.

THE OPHTHALMOSCOPE. July, 1912.

1. Keratitis as a Cause of Myopia, by J. A. Wilson.
2. A Case of Retinal Embolism, by R. Beaston Hird.

August, 1912.

1. A Case of Rhinosporidium Kinealyi of the Conjunctiva, by R. H. Elliot and A. C. Ingram.

AMERICAN JOURNAL OF OPHTHALMOLOGY. July, 1912.

1. The Diagnostic Value of the Form and Color Fields in Hysterical Amblyopia, by J. H. Gross.

ANNALS OF OPHTHALMOLOGY. July, 1912.

XV. Simple Senile Cataract Extraction with Incision of the Root of the Iris, A. Elshnig, Prague (trans. by H. S. Gradle).

XVI. Another Case of Chloroma, A. J. Bedell, Albany.

XVII. The Early Symptoms and the Ocular Findings in a Case of Cerebral Tumor, Oscar Wilkinson, Washington.

XVIII. Secondary Glaucoma in Interstitial Keratitis, With Report of Case, Edw. A. Shumway, Philadelphia.

XIX. Sympathetic Ophthalmia, F. Deutschman, Hamburg (trans. T. T. Blaise).

XX. Congenital Absence of Both Lower Puncta, Lifelong (Double) Dacryocystitis—Apparent Cure from Dacryocystorhimostomy, W. H. Luedde, St. Louis.

XXI. Submucous Dacryocystorhimostomy for Persistent Dacryocystitis, W. M. C. Bryan, St. Louis.

OPHTHALMOLOGY. July, 1912.

1. Arterio Sclerosis of the Retinal Vessels, by E. L. Oatman.
2. The Treatment of Trachoma with Radium. The Use of Radium Coated Plates for this Purpose, by Chas. W. May.

3. Two Cases of Retinal Detachment of Myopes Cured by Simple Sclerotomy, by Paul Bettainneux.
4. Metastatic Purulent Ophthalmia. Report of a Case of Puerpural Origin, by F. W. Alter.
5. Sympathetic Irido Cyclitis Following Cataract Extraction. Report of a Case, by Aaron Bear.
6. Trifling the Distance of Test Cards by Catoptrics, by J. N. Rhoades.
7. The Alternative to Strabismus, by A. A. Bradbourne.
8. The Pathological Condition of the Eye Secondary to Disease of the Lymphatics of the Neck and Throat, by E. W. Alexander.
9. The Rational Method of Removing Fragment of Iron from the Interior of the Eye, by F. W. Lamb.

JOURNAL OF LARYNGOLOGY, RHINOLOGY AND OTOTOLOGY.

August, 1912.

1. The Favorable Influence of Rhinology or Pharyngo-rhinological Operation on Exophthalmos and Hypertrophy of the Thyroid Gland—A Contribution to the Treatment of Graves' Disease, John Sendziak.
2. The Teaching of Oto-rhinolaryngology in France, George Gellé.

JOURNAL OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY.

July, 1912.

Recent Observations in the Eye, Ear, Nose and Throat Clinics of Vienna and Berlin, Frank R. Spencer, Boulder, Col.

"The American Medical Association of Vienna was established as a result of a proposition by Dr. Ravold, of St. Louis, at the Thanksgiving Day Banquet of the American physicians, November 28, 1903.

Organizing February 6, 1904, with thirty-five members, it now numbers 1,500.

On September 21st, 1910, the association left its old quarters in the Café Klinik where it had been for six years, and moved into new and permanent club rooms at

Schlosselgasse 28, opposite the main entrance to the Allgemeines Krankenhaus.

The Association rooms consist of five large handsomely furnished rooms, most conveniently located, and will fill a long felt want among the physicians who come to Vienna. The lounging room, in brown, is

furnished with large arm chairs, leather covered divans, piano, etc. The reading room and library is done in red and the secretary's, or business, room in green. In the secretary's room is the Association bulletin board on which are posted notices of all courses and other information of interest to members. A pretty room has been arranged for the ladies, not only for the use of those studying medicine, but also for the wives and daughters of visiting physicians. Everything is harmonious and in good taste. A good reference library is in the process of formation; a number of valuable medical works have already been contributed, and all the leading medical journals will be found on the library table.

All physicians coming to Vienna for study are requested to enroll their names in the association's registration book and to become members. By so doing, they will be furnished all necessary information for their rapid orientation on arrival in Vienna; will be allowed free access to the association's reading room and reference library, and will be given all the privileges of the association rooms in which they will have opportunities for social intercourse and scientific discussions with other members.

The right of precedence in all book courses is determined by the date of registration. Here also the association's annual Blue Book (20 cents) and button bearing the insignia of the Association may be obtained. A salaried secretary is in charge of the rooms, and it is his duty to give newly arriving physicians all the information they may desire.

While I was in Vienna there were over two hundred physicians, most of whom were Americans, studying in the general hospital, as the association has grown rapidly in the past few years. Almost all of the post-graduate courses are given under the management of the A. M. A. and, if it were not for this, new arrivals would have to waste a great deal of time in getting started; at present not one single day need be wasted. However, the association advises physicians to arrive on the 20th, of any month, so they can spend ten days inspecting the clinics before they begin any courses the first of the following month. Many of the courses begin the first of each month. You are allowed to visit each course once free of charge.

Most of the courses are limited to ten men and are posted on the bulletin board in the A. M. A. rooms. As soon as ten names have been written on each slip of paper, designating the course, it is as-

signed by the orientation man in charge of that department of medicine. The average cost of each course is about sixty kroner or \$12.00. Courses in surgery cost from \$14.00 to \$20.00 or even \$30.00 in the most advanced ones. The average duration of a course is twenty hours or about three and a half weeks. As one can conveniently carry six to eight courses at a time, leaving several hours a day for study, it is possible to keep both pleasantly and profitably occupied each and every week day. This also leaves some time in which to visit dispensaries, clinics, etc., and see operations."

KLINISCHE MONATSBLAETTER FUR AUGENHEILKUNDE.

June, 1912.

Ueber Den Einfluss der Masage auf die tension Normaler und Glaukomatoser Augen.

PRIVAT DOCENT DR. PAUL KNAPP, University Eye Clinic, Basel.

Dr. H. Pagenstecker, in 1871, first gave exact indications for massage in ophthalmology.

His indications were for corneal opacities, phlyctenules, scleritis and episcleritis.

The contraindications were iritis. Pagenstecker observed a lowering of the intraocular tension after massaging normal eyes.

This article was followed by a series of articles whereby massaging was recommended for traumatic cataract. Beginning with the writings of Wickerkiewez, Schnabel and Prof. Costonuris, a host of writers report cases of lowering of the tension in glaucoma.

We are indebted to Maklakoff for the beginning of a scientific investigation of massage by using the tonometer.

He came to the conclusion that in normal eyes, a considerable reduction of tension occurred—also in cases of glaucoma.

Maklakoff's works created new interest in this subject, especially amongst the Russian ophthalmologists.

In 1899 Darrier credited massage as exerting a beneficial action on the refraction of the eye. He reports having had cases of hyperopia of 2 D. in children disappear—also visual improvement in myopia without lessening of the degree.

Later he urged massage for progressive myopia and macula changes of this refractive condition. He reported fifty cases of progressive myopia with improvement in the macula changes.

He reports four cases of glaucoma in the prodromal stage completely cured by massage.

Elschnig saw good results in various diseases of the eye with massage and opens up a new field for its usefulness—in embolus of the central artery—thrombosis and retinitis albuminuria.

This was corroborated by Van Duyse who saw a case of total blindness from embolus of the central artery of the retina, in a patient 72, clear up completely to perfect vision.

A review of the literature from the time of Pagenstecker shows massage indicated—

I. For lid spasm, blepharitis, chronic conjunctivitis, trachoma, thickening of the lids and hypersecretion of the glands.

II. Acute inflammatory processes are not amenable to massage, but in keratitis, parenchymata, pannus, old corneal scars, scleritis, episcleritis, it is very useful. Accommodative asthenopia is very favorably affected.

The fact that massage lowered tension was confirmed by all investigators. Knapp making a study of the practical value of massage in glaucoma made some interesting deductions.

I. He found that the tension of the eye diminished with each decade of life—this confirms Wegner's experiments. But he is unable to deduct whether the lowered readings of the tonometer are due to a reduction of tension of the fluids of the eye or to a change in the elasticity of the sclera or cornea.

II. He established beyond a doubt that massage on normal eyes for 5 minutes, in a short time produces a minimum tension for that eye, but in the majority of cases the tension becomes normal within three-fourths of an hour.

III. The anterior chamber shows no increase of albumen experimentally.

IV. In fourteen cases of acute glaucoma massage was used without any benefit, but in the prodromal stage of glaucoma, especially in glaucoma simplex, it is indicated.

A decided reduction of tension occurred in nineteen cases of glaucoma which were operated and as part of the post-operative treatment massage instituted.

This fact is the essential feature of Knapp's article and he recommends massage of the eye following iridectomies for glaucoma as a means of promoting the formation of a filtering scar.

BOOK REVIEWS.

THE PITUITARY BODY AND ITS DISORDERS. Clinical States Produced By Disorders of the Hypophysis Cerebri. By HARVEY CUSHING, M.D., Associate Professor of Surgery, the Johns Hopkins University, Professor of Surgery (elect) Harvard University. 341 pages. 319 illustrations. Cloth, \$4.00. J. B. Lippincott Co. Philadelphia. 1912.

This amplification of the December, 1910, Harvey lecture before the New York Academy of Medicine is a valuable addition to that most important class of books in the library of an up-to-date man, *i. e.*, monographs.

The studies so completely presented in this volume are of importance to the nose and throat specialist, not only because of the situation of the hypophysis, but on account of its accessory gland "Hypophysis pharyngea" (Haberfeld), an epithelial "strand" varying from 1 to 7 mm. in length, situated in the mucous membrane just behind the ala of the vomer.

Visual disturbances are the most common and most serious of all the neighboring signs. The optic nerves are particularly apt to suffer, whether from extension of a hyperplastic struma beyond the sellar confines or from the effects of a primary growth. Consequently the degree of implication of chiasm, nerves or tracts bears no direct relation to the size of the sella.

The optic atrophy is a so-called primary one, and the disk shows no edema except in the late stages when the growth is so large as to cause general pressure phenomena—due in the vast majority of cases to occlusion of the foramina of Munro with ensuing dropsy of the lateral ventricle. If the optic nerves are completely enveloped in the tumor mass there will not be choked disk because Schwalbi's sheath could not be distended by the tense cerebro-spinal fluid—a strong argument in favor of the mechanical versus the toxic theory of so-called optic neuritis of tumor.

The amblyopia associated with a primary atrophy more often represents a physiological block to light impulses than an actual destruction of the nerves—operation having restored vision in a number of the cases reported.

A history of troublesome epistaxis is very common; the bleeding may be excessive.

It is not unusual for patients to mention an occasional unexpected intermittent discharge of mucus into the pharynx. This may account for some of the reported cases of primary optic atrophy in supposed association with disease of the sphenoidal cells, and for many prolonged treatments of supposed primary sinus disease.

A complete physical examination should always include the retro-

pharynx. In a few of the cases reported a protrusion of the tumor was seen, and in another a nodule which was taken for an enlarged pharyngeal hypophysis.

There is a bibliography of ten pages—256 references made in the book. The index is a very good one, the typography and binding—particularly the radiograms—excellent.

SURGERY OF DEFORMITIES OF THE FACE, INCLUDING CLEFT PALATE.

By JOHN B. ROBERTS, A. M., M. D., Professor of Surgery in the Philadelphia Polyclinic, Surgeon to the Methodist Hospital; formerly Assistant Eye and Ear Surgeon to the Children's Hospital, and Demonstrator of Anatomy in the Philadelphia Dental College. Illustrated with 273 figures. New York: William Wood & Company. MDCCCXCII.

This compact volume of almost three hundred pages we think is only the second really comprehensive treatise in this special field of surgery by a surgeon of ethical standing, indicating a revival of interest of the surgeon in this line of work, which, for many years past, has been relegated to the self-styled surgeons of the "beauty specialists" class of quack.

Of great interest is the author's history of the development of Plastic Surgery, the earliest treatise on which was "De Curtorum Chirurgia per Institutionem. Venet, 1597, by Tagliacozzi, of Bologna."

The characteristic of this treatise is the clear and concise manner in which the author considers the fundamental principles underlying the operative procedures, the anatomy and physiology of the parts is short but lucid, the anatomical terms, "nasion and stephanion," we think, will be new to many of us. The chapter on the "Characteristics of Surgery" includes most thoro directions as to flap making and suturing, with preferable materials for the latter under different circumstances.

Only the operations for specific malformations are given which the author personally finds most applicable, but these are portrayed with precision borne only of an experienced manipulator. About fifty pages each are allotted to the consideration of deformities of the (a) nose, (b) eye, (c) cleft palate and hare-lip, and several other minor conditions, as lymphangioma, nevus vasculosus, cheloid, etc., are included.

On account of its practicability we are pleased to see a description of Davies-Colley operation for cleft palate, the first extensive reference that we have noticed since its original description in the *London Lancet* about 1895.

The numerous illustrations, which are excellent, has necessitated the use of heavy glazed paper thruout, for which we wish to bespeak the various readers' appreciation to the publishers.

The Journal of Ophthalmology, Otology and Laryngology

Vol. XVIII

Lancaster, Pa., and New York, October, 1912

No. 10

EDITORIAL.

FISCHER'S COLLOID ACIDOSIS THEORY OF GLAUCOMA.

THIS theory,* without doubt, is one of the most important contributions to our knowledge of glaucoma; it is practical and not inconsistent, but has not yet been satisfactorily shown to be the underlying cause of all cases and all kinds of glaucoma.

Based upon experiments on the absorption of water by fibrin and other colloids, and upon increased ocular tension of fresh sheep's eyes immersed in fresh water and in solutions of acids and salts, Fischer holds that the increased tension of glaucoma—like the edema of nephritis—is attributable to increased absorption of water by the tissues of the eye, due to chemical changes (acidosis) within the eye which increases the affinity of the ocular colloids for water.

This chemical change may be due to an accumulation of carbon dioxide, to abnormal development of such acids as are a constant accompaniment of states of lack of oxygen, or to autolytic changes in inflamed tissue.

The corneal opacity, whatever its degree, is produced (he asserts) by precipitation of some of the colloidal constituents of the cornea which—under some circumstances—may be reabsorbed.

Professor Fischer, unlike many other contributors to our knowledge of the pathology of glaucoma, proves (at least in many cases) his position by providing an efficient remedy.

Sodium citrate, he found, has the power (to a greater degree than the chloride) to inhibit the increase of tension and also to decrease the tendency to corneal turbidity.

*"On the Nature, Cause and Relief of Glaucoma." By Martin H. Fisher, M. D. *Transactions of the American Academy of Ophthalmology, Otology and Laryngology*, 1911.

Clinically, 5 to 15 drops of a 4.05 per cent. ($\frac{1}{8}$ molecular) solution in mild cases or for subsequent treatment in others, and the same amount (enough to gently distend the connective tissue) of a 5.41 per cent. ($\frac{1}{6}$ normal) solution in severe cases of glaucoma are injected under the conjunctiva with a fine hypodermic needle. Chemically pure sodium citrate must be used. Fischer precedes this injection with cocain and adrenalin, others use acoïn or alypin; the pain, which is sometimes severe, is relieved with alternate hot and cold compresses.

The $\frac{1}{8}$ normal molecular solution has an osmotic pressure below that of the human tissue fluids, the $\frac{1}{6}$ molecular one that is slightly above.

This, entirely harmless, is always followed promptly by a fall in the ocular tension which is appreciable in ten minutes and may reach sub-normal. The effect—relief of all subjective symptoms (except structural blindness)—lasts three to six days or even more. The injection, by relieving pressure, not only favors a return to normal circulation, but in event of an operation makes that more easy and less dangerous. Of course this is temporary treatment; as Terson well says ("Pathogénie du Glaucome"); glaucoma is a local manifestation of a general disease, an edema in a closed, or easily closed, cavity.

Fischer, in accordance with his conception of a general acidosis due to infection or a circulatory disturbance, not only combats whatever causes can be discovered, but alkalinizes the patient by (1) giving alkali to neutralize the acid; (2) salts to reduce the edema; and (3) an abundance of water to wash the acid from the tissues. He keeps the patient in bed; increases the vegetable and decreases the protein diet; and gives a glass of water, or of Vichy, every hour of the 24, adding to this half a gramme of sodium carbonate. The patient's food is salted and includes salty articles of diet.

If the case requires more promptness than the 24 to 72 hours of the above, a hypertonic sodium solution at 105° or 110° F. may be injected into the rectum.

R.

Sodium chloride, 14 grammes.

Sodium carbonate (crystallized), 15 grammes.

Water, 1000 cc.

If crystallized sodium carbonate is not available the dried (stronger) preparation may be used, but of this *only one-third* the amount must be employed. The solution must *not* be made up with hot water, for this drives off carbon dioxide and so converts the carbonate into the

stronger and more irritating hydroxide. The whole liter may be administered at once, slowly, or in four equal portions half an hour apart. The alkali and salt are absorbed more rapidly than the water.

The posterior colloids of the eye—sclera, choroid, vitreous, lens—are capable of greater swelling than the aqueous and cornea, therefore the obliteration of the filtration angle and shallowness of the anterior chamber are probably—according to Fischer—a result rather than the cause of the high tension.

That the aqueous is albuminous in glaucoma is well established and its mechanism pretty well explained; how does the colloid theory harmonize with this? Mere edema without inflammation will not cause an albuminous exudation until after it has caused an inflammation.

There are two lines of investigation needed to support Fisher: examine for acidity freshly enucleated glaucomatous eyes and look for edema of their tissues.

True, there have been many cases of simple or non-inflammatory glaucoma without any edema of the intra-ocular tissues having been reported, but it is important to know whether or not these observations were made during high intra-ocular tension or during the stage of transitory subacute inflammation.

Doctor of Ophthalmology. The degree of, is to be conferred upon properly qualified candidates by the University of Colorado. Candidates for the degree are required to take a practical clinical course in diseases of the eye one year in connection with systematic reading, after which they must take the special course in ophthalmology in Denver at the University and submit an acceptable thesis.—*J. of O. and O-L.*, July, '12.

SYMPOSIUM—PROPHYLAXIC.

HERBERT D. SCHENCK, M. D., CHAIRMAN,

Brooklyn, N. Y.

CLEANLINESS IN SURGERY.

GEORGE B. RICE, M. D.,

Boston, Mass.

IN the death of Lord Lister, occurring in February of this year, the members of the surgical profession are forcibly reminded of what we owe to the efforts of this one great man. Professor Caird refers to him as one who has done more for the human race than any who had hitherto walked on the face of the earth.

He speaks of his first visit to the infirmary in Edinburgh. There in some of the wards he saw patients dying like sheep on the hillside. He then walked into Lister's ward and was astonished at the difference.

One must read "The Medical and Surgical History of the War of the Rebellion" to form any idea of the terrible mortality which existed previous to Lister's discoveries. As an instance, which particularly interests us, in seven cases of tracheotomy performed for the relief of difficult respiration in acute conditions, non-diphtheritic, all but one died. Eighty per cent. of all surgical cases treated at the University clinic at Munich died from hospital gangrene. Mortality from amputations reached 60%. Abdominal operations were rarely performed because of the frightful mortality. The surgical wards of the great hospitals were crowded with patients suffering from so-called hospital pest. Pyemia, erysipelas and gangrene came in epidemics, and the life of a sensitive surgeon was one of great responsibility and discouragement.

In 1858 Pasteur, the chemist, laid the foundation for bacteriology, and it was to Pasteur that Lister was indebted for the basis of his research in antiseptics.

May I be pardoned for saying something about the microörganisms we must consider in the fight against surgical infections.

MICROCOCCL.

*“The bacteria found in wounds are usually micrococci and bacilli.

“The micrococci are spherical cells which multiply by fission and always produce spherical cells. Each micrococcus consists of a delicate capsule filled with microprotein. When, in the process of fission, two micrococci adhere, they form a diplococcus. When micrococci grow in chains, they form streptococci; and when in clusters, staphylococci. Micrococci resist heat for some time and are most difficult to kill with chemicals.”

BACILLI.

“The bacilli are bodies of which the length is greater than the breadth. The length may just exceed, or be twice, thrice or many times as great as the breadth. They possess a cell membrane and microprotein contents, and some kinds have, in addition, one or more spores. Others have delicate lashes or flagella, by which they propel themselves through the fluids which they inhabit. Bacilli multiply by fission and by spores. In the former process a single rod divides into two, which may remain adherent by their ends (diplo-bacillus), or by a continuance of the process of growth and fission a long thread (leptothrix) may result.”

SPORES.

“Spores are minute oval or spherical cells, which appear as clear shining spots in the substance of bacilli. They serve to perpetuate the species, and after having been quiescent for many years may, when placed under favorable conditions of warmth, moisture and of nutriment, sprout and give birth to bacilli the same as those from which they themselves sprang.”

VITALITY OF SPORES.

“Spores are endowed with extraordinary tenacity of life. They resist for long periods considerable degrees of heat and cold, or the action of strong chemicals. In addition to their cell wall, both cocci and bacilli possess a covering of an albuminous substance, often mingled with fat (Mace). When this is coagulated by chemicals it adds greatly to the resisting power of the organism.”

*“Aseptic Surgery,” by C. B. Lockwood.

MULTIPLICATION OF BACTERIA.

"The prodigious rapidity with which bacteria multiply is shown by Mace's calculation. According to Cohn, it took two hours for two bacilli to complete their fission into four. Calculating upon this basis, Mace says that in three days these would have produced four thousand seven hundred and seventy-two billions. Klein and Buchner saw bacteria divide more quickly. According to them fission takes place in from eighteen to forty-five minutes."

PHYSIOLOGY OF BACTERIA.

"The various bacteria, in addition to warmth, moisture and nutriment, require oxygen. Some flourish in the presence of free oxygen (aerobes), others (anaerobes) will not grow in the presence of free oxygen. The latter are cultivated by bacteriologists in an atmosphere of hydrogen and nitrogen or in sealed capsules. It is hard to believe that a living thing can exist without oxygen, and it is almost certain that anaerobes obtain theirs from the substances in which they live. Finally many bacteria live indifferently in either the presence or absence of free oxygen.

"As bacteria grow they manufacture or excrete substances which are called ptomains or toxins. Some of these are the most potent poisons known, and are comparable to morphin, atropin, strychnin and muscarin. When Koch's treatment of tuberculosis by the injection of the toxins of the tubercle bacillus (tuberculin) is used it is most striking to see an almost inappreciable dose send the temperature up to 105° F., cause erythematous rashes similar to a violent outburst of erysipelas and in some instances almost kill the patient. Bacteria also act as ferments and produce poisons by causing chemical changes in the substances in which they live."

All dead organic substances in contact with the atmosphere undergo decomposition, which is favored by the combined influence of moisture and warmth. Putrefaction is produced under the influence of microorganisms, which are everywhere present and everywhere adherent.

It is not alone the presence of these microbes which cause suppuration, but it is also the presence of certain chemical changes which take place in the tissues and which are produced by chemotaxis.

Dr. Carl Beck says: "To Lister we owe mother Antisepsis, who, though she died in parturition, brought forth her idealization, Asepsis."

Lister's early methods were rather crude. The wound was washed with a one to twenty per cent. solution of carbolic acid in water to destroy the germs of putrescence and then dressed with lint impregnated with carbolic acid. Instruments were kept in a carbolic acid solution and sprays of carbolic acid were disseminated through the air over the surgical field. For opening abscesses a piece of cloth, soaked in one part of crystallized carbolic acid to four parts boiled linseed oil was laid over the site of the incision to be made, the knife dipped in some of the solution and then the dressing allowed to fall back in its place. Crude as these methods were Lister records in 1867 that for nine months he had no cases of erysipelas, pyemia or hospital gangrene in his wards.

In this country for a long time Lister's methods were looked upon with disfavor. The antiseptic idea, however, was soon accepted by surgeons all over the world, but each had his own method of carrying it out, and the result of this was confusion.

The bacteriologists now took an important part in the study of surgical diseases, and it was not long before cleanliness came to be recognized as an important measure in the conduct of surgical work. The great advance in this direction was made by the Germans, who saw that the air was not the only source of infection, and who recognized that under the old regime every operation was a bacteriological experiment.

Lister's spray was continued until 1887, but before that year the Germans introduced a rule of thorough scrubbing of the surgeon's hands and the site of the proposed incision. Now opened the aseptic era.

Professor Ernst, one of the pioneers of bacteriology in this country, was one of the first to advocate the use of dressings so prepared as to be free from bacteria. Dr. Ernst explained that surgery called for the same precautions as bacteriology.

And so over a period of years, with infinite pains, was built up the magnificent monument, asepsis, not yet completed, but overwhelming in its grandeur and dominating the surgical world of today.

We have learned that under normal conditions the unexposed tissues of the body are free from microorganisms. This has been ascertained by the experiments of Lister, Pasteur, Tyndale and others, and confirmed by the modern surgical practice.

"Investigations show that bacteria are absent from the blood and

from various organs—from the kidneys, ureters, bladder and from the urine of healthy individuals; from the liver, gall, bladder and biliary ducts, and from the bile; from the salivary glands and the saliva in their ducts; from the alveoli of the lungs and from the expired air, provided it is not mixed with the secretions of the mouth or air passages; they are also absent from the mammary gland and from the milk in its ducts, and from other organs and secretions which it is unnecessary to specify. The entrances into the various ducts and passages are, however, exceptions to these rules; so that, to obtain the various secretions uncontaminated with bacteria, stringent precautions are required."

Let me describe briefly the technique of the modern surgeon. His whole business is to exclude bacteria. The details are not always the same, but the essentials are. As the writer is familiar with the methods of the majority of surgeons at the Massachusetts Homœopathic Hospital, with which he is connected, he will use this institution to illustrate his description.

First, the operating rooms are so constructed that cleanliness is possible; stone, cement and enameled surfaces, without sharp angles, are the rule. Instruments are sterilized by steam, the immersion lasting from fifteen to thirty minutes. Knives, scissors and needles are sterilized by steam for five minutes and then immersed in alcohol. The operator, assistant and clean nurse scrub arms and hands in soap and warm water ten minutes, followed by a scrub in acetic acid, chloride of lime and water, five minutes, and then sterile gloves, frock and cap are put on. Some of our surgeons also use a protector over mouth and nose.

The patient, who has been prepared the day before by scrubbing over an area about the site of the proposed incision, followed, in some cases, by an application of iodine and alcohol, and in others by a soap poultice, is now brought in and the iodine application to the skin repeated. Sterile towels and a large sterile sheet envelop the patient, leaving the site of the operation exposed. Instruments are laid on sterile towels. Every precaution is taken against infection of instruments or hands by contact with anything nonsterile, and should such contact take place fresh towels, gloves and instruments are brought unless the case is an emergency. If nurses and assistants are thoroughly trained this accident rarely happens.

In operations about the head, neck and mouth this technique is some-

what modified. Anæsthesia is frequently given through a nasal catheter or tubular mouth-gag, using the same aseptic precautions as before. In throat and intranasal operations perfect sterilization is impossible, but the surgeon's hands are carefully prepared, instruments sterilized and contact with unprepared material avoided. So far as is possible irrigation of the passages with a warm Dobell's solution is adopted as a routine measure before, after and during operation. In nasal and throat operations, under local anæsthesia in the office, perfect assepsis is again impossible, but it can be approached, and the more nearly these principles are carried out the better will be the results. Fortunately tissues about the nose and throat show marvelous immunity against infection following operations.

In the writer's operative work about the nose he scrubs the outside with Johnson & Johnson's synol soap, swabs the vestibuli with peroxide and frequently, though not always, irrigates the passages with a warm alkaline antiseptic solution; hands, instruments, cotton and dressings are all sterilized, and all possible care taken against infection.

Asepsis to be carried out properly must become a habit. One must instinctively refrain from touching a nonsterile object or to use an instrument which has become contaminated. Only by constant care and training can this be accomplished.

Knowing as we do the importance of asepsis, is it not criminal to neglect all possible precautions to safeguard those who are placed under our care?

The time will soon come when sepsis from negligible causes will render one liable under the law for malpractice, and a just prosecution will follow.

It has seemed to the writer, in his observations of the work of nose, throat and ear surgeons, particularly in this country and abroad, that a very gross neglect of these aseptic precautions is not infrequent.

He has seen more than once instruments used from one patient to another without even an attempt at sterilization. He has seen a surgeon operate upon one case after another without washing his hands. Instruments and towels, after having fallen upon the floor, have been used by the surgeon and the operation continued as though nothing had happened. On one occasion, during a mastoid operation in the great city of New York, he saw a spectator just in from the street, handle instruments and even hand one to the surgeon. A sterile towel slipped to the floor and was replaced by an on-looker. What a farce this was!

In view of our common knowledge of this subject, asepsis, how can such things be? One may argue that frequently, in spite of this neglect, the patient recovered well, but think how many patients must have been infected with syphilis by these blunders, of how many have suffered for weeks with septic throats, of the deaths even—and one is horrified.

May I make a strong plea to you, fellow-members, to use your influence toward the more universal employment of cleanliness in surgery that we may be more truly protectors and saviors of the lives of those entrusted to our care.

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220 Clarendon St.

The Pancreatic Syndromes in Tuberculosis.—M. Loeper states that tuberculosis is frequently accompanied either by pancreatic insufficiency or by pancreatic hypersecretion. The most frequent sign of the former is diarrhea. The latter is not infrequent at the beginning of tuberculosis. Tuberculosis may lead either to sclerosis, degeneration, atrophy, or inflammation of the pancreas, or to hyperplastic reactions, which are well marked not only in the lobules but also in the islets of Langerhans. From a practical point of view the author recommends what he calls "the intensive pancreatization" of tuberculous patients and states that in many cases of tuberculosis in which sclerotic or degenerative changes of the pancreas have followed hypersecretion the stimulation of the pancreatic secretion has given him very satisfactory results.—*Progress Medical*.

PROPHYLACTIC SURGERY OF THE EYE.

J. HOLBROOK, SHAW, M. D.,

Plymouth, Mass.

"All that we have to do is not to obstruct Nature in the execution of those offices to which she is generally fully equal, in which we can lend her no assistance beyond removing impediments out of her way." Pott. 1773.

SURGERY at first must have taken little thought of the morrow, being amply busied with relieving the present and insistent evils which clamored for immediate attention. To-day, with the refinements of technique which the last century has evolved and with the laity educated up to a confidence in its efficacy probably never before attained, unsightly deformities and diseases are met with increasing infrequency. One must visit those sparsely inhabited regions far from the centers of civilized life to find many operable cases of disease and deformity which have not benefited by the surgeon's skill.

Men possessing but the merest smattering of surgical knowledge when they have penetrated into the far north have found themselves besieged and their movements hampered by the importunities of people from far and near whose unhappy plight we should deem wholly unnecessary.

In every civilized country today the surgeons are correcting the operable defects and diseases as they appear, and there is now time to see what may be done to prevent their development, to come before them and by judicious interference avert impending defects.

Prophylaxis carries with it the inference that we are dealing with normal conditions which would practically preclude the use of surgery. Watts tells us in his "Logic" that "Medicine is distributed into prophylactick or the art of preserving health and therapeutic or the art of restoring health," and it is with the art of restoring health that we associate surgery.

The prophylactic surgery of the eye then is obviously a very limited field and I shall ask your indulgence if at times, lured by the attractions just outside, I venture beyond the strict limitations of my theme.

Surgical interference with pathological conditions in structures contiguous to the eye and its adnexa to prevent their involvement may be properly called prophylactic.

The proximity of the accessory sinuses to the orbital cavities renders any pathological change in them a menace to the delicate organs within. Literature abounds with citations of cases such as this, for instance, from a paper by Risley, Sr.:¹ "Patient subject to pain in head, aggravated by using his eyes, attended at times by sick headaches; he had a high degree of hyperopic astigmatism; fundus oculi congested; correction of refractive error did not give entire relief; examination of nose showed enlarged turbinates blocking openings into ethmoidal and frontal sinuses; correction of the nasal trouble gave entire relief from eye symptoms."

Birch Hirschfield is quoted as believing that affections of the optic nerve frequently arise from ethmoiditis and "lead early to optic neuritis."

St. Clair Thompson,² of London, claims that suppuration of the accessory sinuses may produce chronic conjunctival blepharitis, phlyctenular keratitis, diminution of the field of vision, asthenopia, scotomata, photophobia, dilatation of the pupil, blepharospasm and ptosis. Iritis, cataract (Ziem), hæmorrhagic retinitis (Kuhnt) and glaucoma, he says, have been observed.

De Schweinitz³ reported a case of a young woman who had intense headaches accompanied by scleral congestion and scotomata, relieved by treatment of sphenoidal disease.

Beside the dangers from sinus disease under normal anatomical conditions, there are frequently anomalies of structure which increase the risk. The optic nerve may be in some cases in close proximity to the ethmoid cells on one side and to the sphenoid sinus on the other, so that disease of either one might cause unilateral blindness.

Onodi⁴ has cited fifteen cases in which he has found the canalis opticus communicating freely with the accessory sinuses, and he believes that it is often responsible for venous stasis in the optic nerve and extension of inflammatory processes.

Dr. Dowling called attention, in his discussion of a paper on "Nasal

¹Philadelphia Medical Journal, June, 1904.

²"Diseases of the Accessory Sinuses," in Posey and Wright.

³Transactions of the American Ophthalmological Society, 1910.

⁴Pester Med.-Chir. Presse, Oct. 4, 1808.

Sinusitis" by Dr. Palmer last June, to a number of eye symptoms resulting from ethmoiditis, such as fullness between the eyes, positive pain behind the eyes, muddiness of vision, spots before the eyes and erratic muscular disturbance; his use of argyrol tampons should be valuable in determining the character of the secretion from the ethmoid cells.

Everyone can add cases from his own experience in which persistent ocular symptoms were not reached by the usual measures and the source of the trouble was finally located outside the orbit. Just how the disturbance is produced is not wholly established, but it is not proven that there is any connection of the lymphatics. The structures of the eye probably are affected through the blood vessels which anastomose freely, participating in the congestion of one or more of the accessory sinuses.

Transillumination with a small but powerful electric bulb is of value in locating pathological conditions in the various sinuses, particularly the maxillary. Its evidence is, however, only confirmatory and is not to be too much relied upon. The condition which the examination reveals will determine the surgical procedure necessary to obtain perfect drainage and eventually restore the parts to health.

In this connection I am constrained to say a word with regard to the harmful effect of decayed teeth which harbor pyogenic organisms and constantly threaten the integrity of the cavities which drain into the mouth. It is entirely possible that an acute purulent inflammation of a root of a tooth should extend to the maxillary antrum and produce a general uveitis resulting in blindness, as has indeed actually been the case. The importance of this source of trouble becomes apparent when we note the prevalence of carious teeth among school children as reported by our school physicians.

The flabby pale skin, the photophobia and lachrimation, the excoriating discharge from the nose and moist eczematous eruption on the upper lip and about the eyes and ears of children with phlyctenular keratitis present a familiar clinical picture. If we look further we shall find that these children usually have enormously enlarged tonsils and an abundance of adenoid tissue in the nasopharynx, obstructing nasal respiration and harboring pathogenic organisms. The wisdom of removing these prolific sources of trouble is obvious as a measure for the prevention of this disease and other ills.

Medical inspection in our public schools ought to do efficient service

here, but unfortunately, except in the large cities where dispensaries are available, the very children who most need this help are unable to avail themselves of it through the inability of their parents to meet the expense connected with the operation. Many states now enjoy the benefits of a system of medical inspection of their public school children, but there is a great need of further legislation whereby parents who are unable to have the defects of their children remedied may do so at the public expense without being pauperized.

There are certain ocular conditions which do not depart greatly from the normal, but threaten more or less serious consequences, which may well occupy the attention of the ophthalmic surgeon.

Muscular imbalance is comparatively rare among children. Of 2,100 school children from five to eighteen years old examined by the writer by the parallax test for distance only but 42 or 2 per cent. were found with muscular errors, while the percentage in adults as obtained from office records was forty. Here then is a prolific source of trouble which becomes a greater menace with each year of life, a condition which might be early recognized and remedied. Much attention is being paid to the recognition of visual errors in the public schools of many states, but practically no attention, so far as I know, is being paid to this important defect. Parents should be notified of the existence of muscular imbalance in order that the oculist may intervene and prevent in some the distressing, sometimes terrifying, nervous symptoms which attend uncorrected muscular imbalance, and in others loss of binocular vision with its accompanying limitations and loss of visual power.

Every effort will of course be made to relieve by other means before resorting to the knife. In the esophorias of children, becoming or already become esotropias, the full correction of any existing hypermetropia is made, and if the vision of one eye is defective orthoptic exercises are used to encourage perfect fusion of the images. Dr. Suffa has used a bifocal glass with children in some of these cases with decided benefit, removing the impulse to convergence in near vision by removing the necessity for accommodation. In cases where the condition is due to weakness of the externi this adaption of the bifocal would of course not be available.

Exophorias may be due to an actual excess of power of the externi or, as in the case of the exophoria of myopes, there may be an insufficiency of the internal recti. In both troublesome symptoms may be

relieved by systematic prism exercises increasing the efficiency of the internal recti, but there will be no corresponding diminution of the exophoria. A certain number of these cases of all varieties will wear prisms with benefit, but these can only be determined by using the prisms in a tentative way over the distance or reading lenses, or both, until the tolerance of the patient is ascertained. The use of prisms in hyperphorias affords usually greater relief, when they can be worn, than in the lateral errors.

In esophoria which has become esotropia and is not relieved by the usual methods, the externus should be tucked in the deviating eye, and after waiting and observing the case for at least a year the externus of the other eye may also be tucked if greater effect is needed, but the internus should never be tenotomized for anatomical and functional reasons, pointed out by Dr. Saffa in an article published in the *JOURNAL OF OPHTHALMOLOGY, OTOTOLOGY AND LARYNGOLOGY* for August, 1911.

In marked exophoria, say of ten degrees distance and near or where the eye actually deviates, it is necessary to tuck the internus of the deviating eye and if still greater effect is desired the externus of the same eye may be tenotomized at the same time.

No definite rule can be given for the selection of cases of hyperphoria for operation, but those of six degrees or more will usually be benefited by a tenotomy.

Whatever may be the immediate cause of the elongation of the eyeball in myopia, it seems to be sufficiently proven that civilization is responsible for it. The great majority of cases, produced apparently by excessive use of the eyes for near work, do not result seriously to the eye, but enable it to perform its work with less effort than if it were emmetropic. This has led Schnabel and others to believe that myopia is a sort of natural evolution or adaptation to the requirements of modern life and a positive advantage. Few, however, will be so easily reconciled to the loss of accurate vision for distant objects.

Now that it has been proven that myopia is due to an elongation of the eyeball and not to a curvature of the cornea, the theory that the pressure of the extrinsic muscles on the eyeball is responsible seems plausible, but authorities differ as to the muscles most involved. Those most likely to produce an effect of this sort would naturally be those with the largest contact arc, the superior and inferior oblique and the external rectus. The cutting of the superior rectus advocated by Phillips and widely adopted proved worse than disappointing. Both

the lateral recti have been divided with hardly better success, but the division of the external seems, when carefully performed in selected cases, to be beneficial. At least it relieves the muscular asthenopia and prevents deviation.

In children with marked exophoria who are becoming increasingly myopic, tenotomy of the external rectus, although it must be confessed that its efficacy in preventing progress of the myopia is not proven, cannot be productive of other than good results.

The so-called malignant progressive myopia is undoubtedly a disease and one which so far seems to have resisted all efforts directed towards its prevention or arrest. Perhaps the most astonishing operation ever devised and actually performed, in a desperate attempt to control it, is that of Krönlein which involves a temporary resection of the outer wall of the orbit, division of the external rectus and detachment of the anterior third of the inferior oblique in order to prepare the way for the excision of a piece of the sclerotic eight to ten millimeters broad to twenty millimeters long, extending along the outer side of the globe. This of course has to be done without injury to the choroid. The opening in the sclerotic is stitched up with silk sutures.

The removal of the crystalline lens by discission in myopia of not less than fifteen or sixteen diopters appeals to the imagination and has been popularized by Fukala. In an article on "The Final Results of Phakolysis," published in the *Archives of Ophthalmology*, Vol. xxxviii., Dr. Gelpke, of Karlsruhe, gives the result obtained in a series of 120 cases. The patients were from five to fifty-nine years old and were observed from two to nine years. In 5 per cent. there was loss of the eye from various causes, such as infection, iridocyclitis and detached retina. In 89.2 per cent. there was improvement of the vision from twice to twenty times the original. In the majority of cases vision was doubled. The number of operations required on a single eye varied from one to six. The usual number was two (44.7 per cent.), but many required three (38.6 per cent.). He gives the following absolute indications for the operation:

1. In all cases in which myopia cannot be properly corrected by optical means to enable the patient to attend to his occupation.

2. In all cases of progressive myopia."

And as relative indications:

1. When myopia can be corrected by glasses, but when wearing of glasses is impractical, as in waiters, servant girls, coach drivers, etc.

2. In old or recent macular changes which do not yield to treatment."

Hirschberg is less sanguine about it and, while he believes that it is useful, thinks it should only be undertaken by experienced surgeons in very carefully selected cases. He himself did but twenty-four operations for phakolysis in seven years out of some 3,000 patients of myopia of over six diopters who consulted him.

But after all the surgeon can do little enough in an operative way toward the arrest of myopia and less for the prevention of it. He can, however, use his influence for the improvement of the conditions in our public schools which are chiefly responsible for it.

When we have school buildings lighted from above in the only natural way, school furniture adjustable and adjusted, more oral and chart instruction by the teacher with less intense application to minute desk work by the pupils in the lower grades and more out-of-door recesses with less restrictions upon them, we shall have fewer myopes.

There is a condition of the eye which may be largely the result of anatomical peculiarities, in which the judicious interference of the surgeon may prevent otherwise disastrous results. Persons past middle age with small corneæ approaching ten millimeters in diameter and shallow anterior chambers are predisposed to glaucoma. These patients must be watched and all refractive errors carefully corrected, for we have learned with sorrow that the onset of the disease is often so insidious that they may have no warning themselves, even after the field of vision has been greatly narrowed and the most favorable time for treatment has past. If in these cases observation shows that the tension is at times noticeably increased, that the reading lenses need to be frequently changed and that there is perhaps beginning encroachment upon the visual field, the question arises as to how long we should defer the operation which alone will give the greatest prospect of continued useful vision.

E. Treacher Collins, of London, says: "Many surgeons hesitate to operate on patients with chronic glaucoma when the symptoms are very slight, when the central vision is normal, and when there is only slight contraction of the field of vision. *Yet it is in just such cases that iridectomy is best calculated to arrest the disease.*"

Whatever the exciting cause of glaucoma simplex, whether it be the stiffening of the ocular tissues and swelling of the lens substance, which comes with the approach of age, or some remote disturbance of the

sympathetic nervous system, the real menace to the integrity of the eye is a mechanical obstruction to the normal passage of intra-ocular fluid from the vitreous through the suspensory ligament of the lens into the anterior chamber, and the escape of fluid from the anterior chamber through the meshes of the ligamentum pectinatum into the lymphatics and veins of the sclera.

When the normal circulation of respiratory air and the proper drainage of the middle ear are interfered with by an excessive growth of adenoid tissue in the nasopharynx it is generally agreed that it is wise to relieve the mechanical embarrassment by surgical means rather than by palliative treatment with local applications.

It is true that the responsibilities which the surgeon assumes in opening the eyeball are much greater than in the removal of "adenoids," but on the other hand neglect of the ocular condition means almost certain blindness. If the patient, with as full an understanding as the surgeon can impart, chooses to assume the responsibility of foregoing operative interference, that is his privilege, but it would seem the part of wisdom to relieve the condition before it has become a disease, for there is undoubtedly in every case of simple glaucoma a time when that operation which will best relieve tension and restore the normal circulation of intra-ocular fluid will prove an efficient prophylactic measure, but when that time has passed surgical interference will become a forlorn hope.

43 Court Street.

On Cases of Night Blindness with Peculiar Conjunctival Changes in Children.—Stephenson (British Journal of Children's Diseases) believes that this condition is not very uncommon in the lower strata of society, especially in orphanages. It prevails in the summer and autumn, and is seldom seen during the winter months. The symptom complex, in its fully developed form, includes (1) changes in the ocular conjunctiva and (2) night blindness.

The conjunctival changes are, as a rule, limited to the interpalpebral zone, and usually affects both eyes. More or less triangular areas glistening dry-looking plaques are seen on the conjunctiva. This foam-like material can be easily wiped away and will then return in from 24 to 36 hours. The condition is commonly named "epithelial xerosis" and is caused by the xerosis bacillus.

PROFESSIONAL METHODS TENDING TO THE PREVENTION OF EYE DISEASES.

C. GURNEE FELLOWS, M. D.,

Chicago, Ill.

PROGRESS in medicine for the last few years has been as much, if not more, toward prevention than toward cure. In the line of prevention no one thing has been more prominent than has the teaching of the public through popular magazines, the daily press, lectures, the stereopticon and individual instruction, for the dissemination of knowledge pertaining to our physical makeup and well-being.

Improvement associations have been formed to agitate the question of cleaner streets and the beautifying of vacant lots, and, above all, to prevent the accumulation of filth and the throwing of waste paper into streets and alleys, and to stimulate watchfulness over our homes and immediate surroundings.

So the field-houses in our public parks, the auditoriums of our public schools and the lecture rooms of our churches have been filled with people to whom instruction has been given by educated physicians upon this most important subject of prevention of disease, including, of course, instruction as to how to take care of the various organs of the body.

I myself have been asked to deliver such talks, in relation to the eye, before the mothers of the children in a University school, and I doubt not that thousands of these lectures have been given this year to parents in various parts of our land, all tending to the dissemination of knowledge which is for the benefit of the human race.

Such methods are professional methods, although they work through the laity. In other lines, as, for instance, the prevention of ophthalmia neonatorum, the work of prevention is furthered by laws which demand the suppression of the dangerous disease, and although these laws are not absolutely uniform in all states of the Union, there has been a marked diminution in the number of cases since such laws have come into effect, and the lead taken by New York has been followed by a great proportion of the other states.

These laws do not apply to physicians so much as to midwives and

nurses, for the physician takes care of such cases and prevents blindness through his professional methods rather than because he is compelled to do so by the Commonwealth. As a profession, however, we should agitate the dissemination of information concerning this disease by requiring by law that all such cases be reported to the Board of Health by non-medical attendants, including midwives and nurses.

In a prize essay on ophthalmia neonatorum by Sidney Stevenson he makes the statement that the eyes of all children in any public institution should be treated with argentum nitrate and mercury bichloride, and summarizes the supplementary preventive measures as follows:

1. Obligatory notification of the disease.
2. Instruction of medical students and of midwives as to the disease.
3. Education of the public as to the dangers of the disease.
4. The appointment of an ophthalmic surgeon on the staff of every maternity hospital.
5. The keeping, and if possible the periodic publication, of news with regard to ophthalmia neonatorum in all public institutions.
6. The gratuitous distribution of an efficient solution for prophylaxis.

II.

The general public has been comparatively ignorant of the danger to the eye in the spread of gonorrhœa and syphilis, but within a few years the springing up of societies, which have for their object the diffusion of knowledge of these diseases, has brought it more to the attention of the laity, and physicians themselves have been much less afraid to inform patients of the danger to themselves and their families in associating with those who may communicate the disease. People have been educated as to the primary dangers of gonorrhœal ophthalmia, but it has taken years, and will take still longer, to impress upon the miscellaneous public the danger of tertiary syphilis as affecting the deeper structures of the eye. To this end, and for the purpose of protecting innocent children and adults, comes up the question as to the advisability of compelling by law the reporting of venereal diseases. I do not think we are yet ready to pass upon that question, but progress has been so great and advances so rapid that it may not be long before such laws may be enacted with justice to all.

Meanwhile, as physicians, it is our duty to instruct our families that the danger from these venereal diseases is not confined to local condi-

tions, but that the most terrible results follow the constitutional manifestations.

III.

Examination of the eyes as a means of prophylaxis.

a. The examination of school children has been taken up more or less throughout the length and breadth of our country, and that it is a valuable provision for the early detection of defects has been abundantly proven, but as this subject is to be taken up more at length in another paper I will leave it.

b. Railway employes have been examined for years as to their eyesight, and it has proven so valuable that it is only a little step, which will probably be gradually accomplished, to have examinations of all employes for all defects, including infections of whatever variety, which examinations may extend to all employes whether actually working on engines or congregated in the large offices of the various roads. Under the head of railroad employes, there is no reason why the same medical supervision should not be given to the eyes of street car drivers and motor drivers, particularly those on public vehicles, to whom are entrusted the lives of increasing thousands annually.

This line of prevention includes the subjects of vision and infections, and the wearing of proper goggles to protect the eyes against dust, wind and minute foreign bodies.

c. It is becoming more and more common for employers of labor to engage physicians to keep watch over the physical condition of their employes, particularly after accidents which so continually occur. At present the care of the eyes, except among railway employes, has not seemed of sufficient importance to warrant the employment of a supervising oculist, but the general medical supervisor should be capable of giving such examinations as are necessary to test the vision, compel protection in such dangerous employments as grinding on emery wheels, stone cutting and similar occupations, and not only save the patient but, from an economical standpoint, protect the interests of his employers as well.

As an instance, I can cite the case of a large coal company which has recently undertaken, as a matter of insurance, the employment of medical and legal supervision over every employe, from the mines and railways connected with the company to their ordinary drivers and roustabouts. In case of a suit for loss of vision it becomes a very important

point for the employer, as well as for the medical attendant, to know what the man's vision was when he entered the employ of the company.

IV.

It is comparatively rare that tuberculosis affects the eyes primarily, but it occurs sufficiently often for one to be on guard. Tuberculosis may affect the iris and other portions of the eyeball, as well as the lids, and is apt to be overlooked by the general practitioner more often than by the oculist. When examinations are made by a general man he should be in touch with a specialist, to be able to refer cases requiring it, to a man of wider experience in diagnosis.

31 Washington St.

A Case of Nutmeg Poisoning. (*Myristica fragrans*.)—E. E. Hinman reports the cause of a woman of 36 years who was in the habit of eating nutmegs, of which she was very fond. On one occasion she ate four or five nutmegs. In a few hours she began to feel queerly, weak, dizzy, and hardly able to walk. When seen several hours later she was in a condition of collapse. She was extremely pallid, the pulse was 150, feeble and irregular; the pupils were about three-quarters dilated, and refusing to respond to light or accommodation; respiration about 23, and shallow. She complained of an intense dryness of the mouth and throat, a feeling of constriction, amounting almost to pain, across the frontal region, vertigo on the least exertion, and numbness of the legs and hands. All objects appeared to be very distant, and as she looked at those near by they seemed to recede. Objects in the left half of the field of vision appeared to be a chocolate-brown color, while those on the opposite side were normal in color. Sounds were also apparently distinct. She was too weak to turn in bed, and when she was raised everything became black before her eyes. The most peculiar symptoms present was a tendency to pass into a dreamy sleep with eyes wide open. Even while talking she would suddenly stop speaking for a moment or two and lie perfectly still, looking directly at me, winking occasionally, and then resume her conversation, remarking that she had been asleep, and been dreaming of doing various things. Treatment consisted of clearing out the intestinal tract and of mild stimulation. Under these measures recovery was prompt and without incident.—*Albany Medical Annals*.

THE PREVENTION OF CHRONIC PATHOLOGICAL CONDITIONS BY THE CORRECTION OF ORO-NASAL DEFORMITIES.*

BY J. B. STEWART, M. D.,

Dayton, O.

WE have been told what adenoids are and have heard what part they play in the production of certain pathological conditions. Among the list of crimes attributed to the adenoid I wish especially to emphasize that of "lack of development"—lack of development of the nasal fossæ and of the maxillary bones, and the chronic pathological conditions consequent upon this deformity.

One of the most potent factors in development is that of function. For normal development of the oro-nasal tract there must be functionation of the nose and of the mouth. To just what extent the adenoid is responsible for disuse of the nose can only be speculative, for we know there are a number of other factors which contribute toward nasal obstruction; but in the great majority of cases of nasal obstruction in children, however, the adenoid will be found conspicuous.

By function the tissues of the nose are stimulated to development and as a result the nasal fossæ is widened and the floor gradually grows downward, forward and outward, thus creating room in the nasal fossæ sufficient for the passage of the air necessary for the nourishment of the adult individual, and also giving room in which the turbinal and septum may properly develop and functionate.

On the other side of the hard palate the jaws have been functioning, and through proper mastication of the proper food materials, the bone cells of the maxillæ have been stimulated to activity and growth by the impact of many thousands of pounds pressure daily. This stimulation has not only acted upon the maxillæ but has favored the absorption of the temporary teeth, the eruption of the permanent teeth and the growth of the alveolar process. The nose by functionation not only stimulates its own growth but also that of the jaw, and the stimulation of mastication is known to extend to the bones of the nose and probably to the brain encasement.

A failure to develop on the part of the bones of the nose or the maxillæ, causes an arrest of development in the other. This may be

*Read before Homœopathic State Society, Ohio.

readily observed. Thus I have attempted to picture the development of this section of the head and to show the inter-relation of the development of the nose and mouth.

At an early age the presence of the adenoid causes nasal obstruction making nasal breathing difficult. Then follow lack of function, lack of development, failure of the floor to descend, crowded turbinates and deflected septum. Also mouth breathing has been established and all of the normal pressures, both muscular and atmospheric, which act in and about the mouth, tending to shape the jaws and guide the teeth to position, are perverted, and result in a very high vault and mal-occlusion of the teeth.

Mal-occlusion makes proper mastication impossible, and the maxillæ lacking this stimulation, fail to develop, and in this way the nose is still farther retarded in its development.

During nasal obstruction and mouth breathing the air inhaled lacks proper moisture, temperature and purity; the atmospheric pressure within the mouth becomes positive and within the nose negative. This condition of negative pressure predisposes to turgescence and hypertrophy of the turbinates, pharyngitis, laryngitis, trachitis, bronchitis and catarrhal conditions of the mucosa of the respiratory tract in general. There is improper ventilation of the Eustachian tube and middle ear. These become hyperemic and inflamed and result in catarrhal conditions and the hearing ultimately becomes impaired.

All of these conditions may become chronic, and with each acute attack, the field of chronic inflammation is extended.

Indications of the arrest of development are very apparent in the mouth and perhaps may be recognized as such earlier than in the nose.

From three to six years of age the jaws should be expanding that they may accommodate the large adult denture. This creates large spaces between the temporary teeth. When these spaces do not appear we may be certain that arrest has taken place, and the permanent teeth, when they arrive, must be crowded into the small jaw. This crowded condition is seen after six years of age and also indicates arrest.

The treatment suggested is largely of a prophylactic nature. The adenoid is readily discovered and removed, but even though this be done at an early age, in a great majority of cases there has already been a check to the progress of development. At this time the arrest may not be recognized except by the keenest observer, but usually the arrest has taken place and the consequent pathological conditions of the respiratory tract and mal-occlusion of the teeth are developing.

With the removal of the adenoids we must not consider treatment complete. If arrest is not discernable at this time, the case should be closely watched and when the arrest is detected, the structures should be stimulated to farther development.

In the case of young children—say, twelve years and under—the treatment should be that of stimulation of the bone cells to greater activity by the application of gentle pressure applied through the teeth by an appliance, to the alveolar process, maxillæ and adjoining bony structures forming the nasal fossæ, thus stimulating the natural downward and forward growth of the hard palate, thereby increasing the air space within the nose and relieving the negative pressure; also developing the dental arches and giving normal occlusion to the teeth and ability to the mouth and nose to normally functionate, thus adding still greater stimulation toward normal development.

In older cases parallel results may be obtained by the application of more extreme pressure to each lateral half of the dental arch thereby apparently and probably opening the suture between the maxillæ and creating greater width within the nose. The suture must then be held open until bony repair closes it.

In all cases of the expansion of the maxillæ the mandible should be made to correspond in order that the function of the jaws may be maintained. In adult cases the maxillæ may be expanded with benefit to the nasal space, but the corresponding adjustment of the mandible to the maxillæ in adult life is difficult and therefore care should be taken.

This orthodontic treatment of oro-nasal lack of development is suggested as a prophylactic measure for the prevention of the chronic catarrhal conditions of the nose and throat in later life, and especially those of chronic catarrhal middle ear deafness and turgescence and hypertrophied turbinates, as found in adult cases associated with mal-occlusion and under development.

The function of the turbinate is important, and operation upon it should be postponed—in children who have mal-occlusion of the teeth—until the jaws have been expanded and the benefits to the nose determined.

For the best results treatment should be undertaken as early in life as possible, while the tissue is most active, when cases are treated at this period success may be expected, and many cases are recorded of beneficial results from such orthodontic treatment.

905-8 Riebold Bldg.

SOCIETIES.

THE AMERICAN HOMŒOPATHIC OPHTHALMOLOGICAL, OTOLOGICAL AND LARYNGOLOGICAL SOCIETY.

New York, Oct. 1, 1912.

Fellow Members of the Amer. Hom. Ophthol., Otol. and Laryngol. Soc.:

Preparation for our next meeting must now begin. The membership owes it to the individual as well as to the profession that this meeting excel all previous ones in scientific interest.

The keen observation of facts as they appear in practice and careful deductions therefrom help the observer, and their statement fires the imagination of the hearer. It is this stimulated imagination which makes for the scientific uplift and broader outlook which should be the result of attendance upon our meetings. If we can throw into the common pool our several observations and thoughts our working capital will become a power for advancement during the following year. As there is always danger that false conclusions may be reached because of the bias of the individual, it is necessary that a full and fearless discussion be invited. In order that this may be obtained it is decided that we have fewer papers than has been the custom, and that each paper or a 500 word abstract, be ready for the discussors by February 1st. It is with a certain amount of trepidation that the officers undertake this innovation, but it seems to them that an increase in strength in our society depends upon the character of the papers, and that all statements shall be able to stand the searchlight of critical discussion.

Most of us have been working along lines of investigation for years and possibly have failed to formulate our observations. Let us now present to the profession the results of our work and defend our conclusions manfully. There is still a rich field in the study of the psychic side of eye symptoms, in the reflexes of nose and throat affections, and in the etiology and treatment of diseases of the ear. What have you done in teaching your partially deaf patients the value of training in lip reading? Do you consider it part of your work to correct the "breathing faults" which remain after a brilliant nasal operation?

At least one session will be given over to the citing of interesting cases and informal discussion. At this time subjects can be broached which may not have interested the members generally, and thus the way be paved for the intelligent discussion of a paper to appear at some future meeting.

Kindly inform the president or secretary at once of your willingness to present a paper.

Sincerely,

GEO. A. SHEPARD,
President.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

34th Annual Congress, May 9th to 11th, 1912.

Hotel Chelsea, Atlantic City, N. J.

(Notes on some of the papers presented.)

"Complications of Tonsillectomy." By Chas. W. Richardson, M. D. Author especially dwelled upon the complication consequent upon effect of the nonpreparation for and the careless administration of the anesthetic. Urging that greater precaution need be given to such administration than is now afforded because it is not as minor an operation as is commonly considered.

"The Upright Position in Ether Operations Upon the Nose, Throat and Other portions of the Head, with Demonstration of a New Method for Attaining the Position with Expedition, Ease and Safety." By THOS. R. FRENCH, M. D. As is well known, the writer is one of the original advocates of the upright position for all rhinological and laryngological operations. He claims that in any viewpoint we take of the subject of position in relation to these operative procedures—the upright holds every vantage point—the principals are: First, the operator always examining the patient in the upright more readily associates the relation of the anatomical parts. Second, he is more accustomed to manipulating his instruments in this position. The combination of these two give the operator a great vantage in performing similar procedures over that in the horizontal position. Third, it has been definitely demonstrated that less ether is necessary. It should be noted that of course chloroform should never be tried in these cases.

Fourth, there is far less bleeding in this position. The third and fourth advantages are attributable to diminished blood pressure in the head in the vertical position.

A very complete and practical table-chair or chair-table has been invented by the author for this purpose. In discussion Dr. Casselberry said that for twenty years he had appreciated the advantages of the upright position and had unsuccessfully endeavored to get his anesthetists to adopt this method on account of the inconveniences attached thereto; but he believed now that French's table entirely removing them, this method will become gradually universal for this class of cases. Drs. Chappell, Mosha and Bliss emphatically endorsed this method, citing their personal experiences therewith.

"Malignant Disease of the Upper Air Passages, with Notes Upon Ten Cases of Epithelioma." By J. Price Brown, M. D. The writer reiterated his belief, as frequently previously mentioned, that the best, and might say only, means of successful coping with malignant growths is with electricity in some form, either (a) electrolysis, (b) electrocautery, or (c) electric light. Concise reports of eight cases of sarcoma and two of epithelioma, in each of which the bulk of the tumor was removed by electrocautery and followed by another form of electricity or radium, with the result of four cures ($2\frac{3}{4}$ to 19 years having elapsed since operation): one died of septic disease in two years, others of too recent occurrence to judge the results. In two he had a radiologist administer radium, using 30 cm., and in two cases there was a decided blanched, shriveling, shiny (varnished) appearance of all the raw and mucous surfaces for several days, and three or four days after application a deposit formed of proliferating granulation tissue on the denuded surfaces, exuding a profuse grumous discharge. In one case where there was an arterial oozing before exhibition of radium the blood became dull, dark or venous in hue afterward.

Dr. Coakley in discussion discredited the ability of making a diagnosis of malignant disease upon microscopical basis, because the appearance of the different cells is very similar, inferring that it might be possible that some of the cases reported might have been syphilitic or tubercular manifestations.

Dr. Chappel, judging from his observation, which he demonstrated was not restricted, concluded that radium outside of skin lesion was not very successful.

Dr. Roe endorsed the use of the electrocautery, reiterating one of Dr. Brown's reasons for its preference, to wit., that while removing the mass of the growth it also in some way apparently inhibited the progress of diseased process in the immediate vicinity of the same.

In closing, Dr. Brown said it was impossible that his cases were syphilis or tuberculosis, as in none was treatment for either of these diseases administered and still they improved.

"Report of a Case of Bronchoscopy for Multiple Foreign Bodies (almond shell and pulp) in a Child Two Years of Age with Some Observations upon Bronchoscopy in Infants and Young Children." By John R. Winslow, M. D. Lower tracheotomy was performed and thus the tube was introduced and several small pieces of the nut sucked out along with a considerable quantity of masticated pulaceous matter. The child subsequently had a severe septic pneumonia, during which several grains of the nut were detected in the sputum—finally recovered perfectly. As only a 4 or 5 cm. tube can be passed through the infraglottic space in a child under three, if there is a possibility of needing a larger one, lower tracheotomy may as well be performed immediately. After mentioning different pro and cons the author concluded it was best to do so in all cases under three years. Furthermore, because of the appreciable difference in the lumen of subglottic space in children of different nationalities he thought that extended and thorough measurements should be made—especially of American children because no adequate observations have been made here—upon which to base a more accurate scale for use in practicing this procedure.

DISCUSSION: DR. JACKSON said this was one of the most difficult class of cases and complimented the writer on his success.

"Orbital Abscess From Infection Through the Ethmoid." By John O. Roe, M. D. Reports of two very interesting cases were minutely given, the evacuation of which was made through the ethmoid cells into the nose—one contained at least a tablespoonful of pus.

A general and varied discussion followed. Drs. Price and Coakley agreed that if ethmoiditis was accompanied by either an orbital cellulitis or meningitis intranasal operation was absolutely inadequate, the external or radical operation only was applicable.

In closing, Dr. Roe reiterated his opinion that he did not agree with the last two gentlemen's opinion.

CORRESPONDENCE.

New York, Sept. 30, 1912.

My Dear Doctor Moffat:

Please accept my thanks on behalf of the faculty for the space devoted, your September editorial, to a review of the work of this institution from its inception to the present time.

There are one or two points however which may mislead those unfamiliar with the school. The first is the statement that the first class—that of 1867, numbered 80 members. This is true, but the large size of that and succeeding classes up to 1875-6 was due to the fact that the N. Y. Homœopathic Medical College occupied a part of the building owned by the N. Y. Ophthalmic Hospital, that at that time the ophthalmic course consisted of class teaching instead of the individual teaching of the present day, and that the ophthalmic course was free to the students of the medical college. I personally received my first general outlines of ophthalmology in such a class in the year 1874.

When the state granted us the right to confer the degree of "Oculi et Auris Chirurgus" in 1879 the methods were changed to individual teaching, the course made much broader and more thorough, and the examinations more rigid. This plan has been followed to the present time, changes being constantly made with a view to raising the standard of instruction and obtaining the best results.

The second point in your editorial to which attention is directed reads as follows:

"It is hoped that before long the courses will be so merged that our degree, O. et A. Chir., will represent a practical knowledge and skill in diseases of the nose and throat as well as of the eye and ear."

It is probable that the fact that we give a separate course in disease of the nose and throat has caused some of the profession to suppose that the degree course covered only teaching in diseases of the eye and ear; as a matter of fact the whole nose and throat course is included in the instruction leading to the degree of O. et A. Chir., and candidates for the degree are required to pass an examination in the nose and throat department equally rigid with that of the eye and ear; because many years ago we realized that the successful treatment of

diseases of the ear* required a good knowledge of all nose and throat conditions.

At the present time we believe we are giving the most complete course in our specialties in the world; this belief is not imagination but is based upon statements of our graduates who have gone to various other institutions, both here and in Europe and returned to tell us that they found nothing to equal the instruction received at the Ophthalmic Hospital College. This is further borne out by the fact that for several years past we have had among our students, graduates of the so-called allopathic school, who, after looking over the field, decided that our teaching covered more ground and did it more thoroughly than that of any other institution.

At the present time our curriculum includes adequate instruction in embryology, anatomy (both general and minute), physiology, bacteriology, pathology, symptomatology, diagnosis, prognosis and treatment of all diseases of the eye, ear, nose and throat, including full courses on the cadaver in each branch, physical and physiological optics and the anomalies of refraction and accommodation.

To cover this ground we give over three hundred and thirty didactic and clinical lectures and require about 200 hours of practical work in the clinics.

The examinations for the degree include a practical examination lasting nearly five (5) weeks, during which time each student is given new cases and obliged to give his personal analysis of the disease or condition present, his diagnosis, prognosis and treatment in writing. This is supplemented by a written and oral examination before each surgeon (of the faculty, which lasts one week).

We use every means at our command to make the course as broad and thorough as possible, and it is a satisfaction to be able to give the profession at large a proper understanding of our work.

Sincerely yours,

CHARLES DEADY, *Dean*.

*In many cases justice cannot be done to the eye without expert knowledge of and attention to the nose.—EDITOR.

HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS.

DEPARTMENT EDITOR, PHILIP RICE, M. D.,

San Francisco, Cal.

Materia Medica Notes.

PHILIP RICE, M. D., San Francisco.

Ailanthus glandulosa.—Violent sore throat, diphtheritic in character; tonsils and fauces dark or purplish in color (lachesis), and in true diphtheria covered with a dark, leathery membrane; the tonsils are studded with angry looking ulcers which exude a scanty but very fetid and grumous discharge. Extreme swelling, both internal and external; swallowing quite impossible on account of the pain. The nose is stopped up and there is a copious, thin and ichorous discharge. The temperature is high; eyes suffused and dilated; face and body red, even livid in color; tongue dry and brown and the teeth are covered with sordes. Mentally the patient is confused and dull, and in extreme cases there is delirium, stupor, even insensibility.

This remedy is particularly indicated in scarlet fever and other eruptive diseases when they run a low or typhoid course. Adynamia characterizes all its conditions.

Baptisia is not unlike *ailanthus* in its general expression. The mental torpor, muttering delirium, besotted countenance and the appearance of the throat are conditions quite alike unto the two remedies. That which will aid in distinguishing between them is the painfulness of *ailanthus* and the painlessness of *baptisia*.

Ammonium carbonicum is still another remedy that has many symptoms and conditions similar to *ailanthus*. In scarlet fever, especially when characterized by severe involvement of the throat, are they similar in their action. The throat under *ammonium carb.* is also swollen both internally and externally, the tonsils are dark red, even purplish, and there is a marked tendency to gangrenous ulceration, intense engorgement of the lymphatic glands, and the nasal cavities violently inflamed with severe obstruction to breathing and profuse acrid and watery coryza. The *alæ* and upper lip are excoriated. When with these symptoms there is associated scarlet fever, measles or some other exanthematous disease the eruption will be dark red, even livid. In this much the two remedies are strikingly similar; and since these, with the usual symptoms common to all acute diseases, as rise in temperature, etc., are often about all that are exhibited, differentiation is difficult indeed. The difference between the two remedies temperamentally, however, is marked, and this will greatly aid.

Ailanthus has a bilious vital motive temperament, that is, the person is dark and has a vital motive development above the average, while

ammonium carb. has a sanguine vital bordering on the lymphatic and phlegmatic. Dark and livid appearance and eruptions characterize both remedies, but under *ailanthus* this is due to the natural dark color of the brunette, whereas under *ammonium carb.* it is due to suboxygenation. Weakness is also a very prominent condition under both, but that which marks the ammonium carb. weakness is a tendency to sinking spells and fainting, and this is entirely absent under *ailanthus*.

Speaking of dark or purplish tonsils brings *lachesis* to mind. All the inflammatory processes of this remedy are characterized by this color. That which distinguishes this remedy from the others in tonsillitis is the special involvement of the left side, extreme sensitiveness of the external throat to touch, < after sleep and < from hot drinks. When the right side is involved it will be found to have followed the left by possibly a day or more and the symptoms will seldom be as severe as those on the left. Sleeps into an < is a modality so characteristic that there is no excuse for ever overlooking it. This may sometimes confuse the remedy with *mercurius biniodide* in that it means < at night; but if we will keep in mind the fact that the *lachesis* patient feels better after he has been awake for a time, the color of the tonsils and fauces, the sensitiveness to external touch, there will be no need to make a mistake.

Ambrosia. Given in the tincture, ten drops in a little water during or after an attack of epistaxis, has been followed by complete removal of the difficulty. Ferr. phos., *arnica*, and *carbo veg.* had been given.

Belladonna (3x followed by sulphur 200th). Has given most satisfactory results in a case of glaucoma of apparently rheumatic origin, which *rhux tox.* had seemed to greatly benefit in its acute manifestations.

JOURNAL CLINIC.

Bismuth-Iodine Paste in Discharging Sinuses. After unfavorable results with Beck's bismuth paste, and other methods usually employed, in cases of discharging sinus following operation for carcinoma of the breast, Dr. L. D. Green (*Cal. State Jour. of Med.*, Dec.) incorporated in the paste tincture of iodine, with the result that the sinus closed in ten days after three injections. He has since used it in a number of other cases with equally good results.

The formula used is as follows:

Bismuth subnitrate	30.0
Vaseline	60.0
White wax	5.0
Paraffin	5.0
Tincture of iodine	2.0

The iodine should be added after the other ingredients have been thoroly mixed and the paste well stirred whenever used.

As there is a possibility of absorbing too much iodine where the amount of paste used is large, the proportion of iodine may be reduced accordingly in such cases.—*Critic and Guide*.

Treatment of Acute Tonsillitis. According to the *Gazette Médicale de Paris*, September 13, 1911, Harold Hays recommends the following treatment: After having sprayed the throat with an alkaline antiseptic, in order to clear away the mucus, he proceeds to spray the throat with a one per cent. solution of cocain and adrenalin 1/5,000, applied especially in the tonsillar region. Finally the tonsils are touched with pure cocain. In a few moments the crypts are opened with a crayon of silver nitrate 50 per cent., the caustic being retained in each crypt from ten to fifteen seconds. The patient is recommended to rest the following day and take a light diet, using pulverizations in the throat of a 50 per cent. solution of peroxide of hydrogen; at the same time to suck ice and to maintain a compress of cracked ice around the neck. Usually the tonsillitis clears up within twenty-four hours, although it may be necessary to repeat the treatment in some cases.

CURRENT LITERATURE.

DEPARTMENT EDITORS.

WM. McLEAN, M. D.,
New York.

FRANK O. NAGLE, M. D.,
Philadelphia.

THE JOURNAL OF LARYNGOLOGY, RHINOLOGY AND OTOTOLOGY. Sept. 1912.

Serous Meningitis, Choked Disc and Multiple Polyneuritis of Certain Cranial Nerves in a Young Alcoholic Smoker. J. N. Roy.

Observations on the Mechanism of Paracusis (Willisii). F. P. Strum.

ANNALS OF OPHTHALMOLOGY. April, 1912.

Origin of the Melanotic Pigment. By Dr. Scilly. (1) In every case colorless stromata, the so-called pigment carriers, are the basis of the black pigments of the eye and malignant tumors.

(2) The colorless pigment carriers are morphologically different from each other, according to the kind of animals and the place of their origin. But the form is typical for the particular place and exactly corresponds to the form of the first melanin particles to appear.

(3) The colorless pigment carriers of the metazoa are derived from the nucleus exclusively, in all the cases investigated by me. Their direct origin from the chromatin of the nucleus and their passage into the cytoplasm can be exactly traced. They stain easily and deeply with all nuclear stains and are comparable to the "chromidia" of Hertwig.

(4) The different actions of the nucleus in the formation of the colorless pigment carriers may be divided into two chief types. According to the present status of our knowledge of nuclear structure and nuclear death, they are the active or productive, and the degenerative types.

(5) The active or productive type is characterized by the nucleus extruding chromidial substance into the cytoplasm, while undergoing no noticeable injury to its vital functions. In this type the colorless pigment carriers arise in the pigment epithelium of the chick's retina in the resting period of the nuclear division. In this category belongs

the widely disseminated extrusion of chromidial substance in the prophase of mitotic nuclear division in embryonal cells and tumors.

(6) The degenerative type involves a partial or complete destruction of the nucleus. Examples of the complete destruction of the nucleus during the pigment development are the pigment epithelium of mammalian embryonic eyes, and the different kinds of pigmentation of melanosarcomata. A partial destruction of the nucleus with subsequent pigmentation is exemplified by the nuclear fragmentation in rapidly developing malignant tumors.

(7) The conversion of colorless pigment carriers into pigment probably takes place under the influence of specific cellular ferments. The latter can exert their action on the chromatin, the mother substance of the pigment, only when the nuclear membrane has normally temporarily disappeared during mitosis, or when single chromatin particles during the resting period are extruded from the nucleus, as described.

The findings described in this work are the results of investigations which extend over a number of years and which were carried out at different institutions.

KLINISCHE BLAETTER FUR AUGENHEILKUNDE, July, 1912.

Ueber das Vorkommen von Pneumokokken auf der Conjunctiva nach der Tranensackextirpation. Dr. Albert Mattice, University Eye Clinic, Freiburg.—*Translated by F. O. Nagle, Phil.*

In 1909 Elschnig and Ullrick examined 131 postoperative cases of cataract with a new culture media (Römer's serum bouillon) and found in 30 per cent. of the cases pneumococci in the conjunctiva. Their conclusions were that postoperative complications are results from pre-existing bacteria in the conjunctiva.

Mattice with the help of more delicate culture media technique tries to solve the problem: What influence extirpation of the lacrimal sac has on the growth and virulency of the pneumococci in the conjunctiva?

Plant and Zelewski have already undertaken to solve the above problem, and in their examinations of the conjunctiva in 40 cases where the lacrimal gland had been removed, the interval between their examination and lacrimal sac extirpation varied between 10 days to 7 years.

Their conclusions were:

(1) Extirpation of the lacrimal sac produces an increase in the xerosis bacilli.

(2) Bacterial virulence is not increased if no catarrhal condition of the mucous membrane is present.

(3) Bactericidal action of tears has been over estimated.

(4) Patients with dacryocystitis who have their lacrimal sacs removed reduce their chances for infection to a minimum.

(5) Pneumococci were found in four cases (10 per cent.) in small numbers and of lessened virulence.

Mattice examined the conjunctiva of 100 eyes where the lacrimal sac was extirpated because of dacryocystitis, using the Elschnig-Ullrick method.

His experiments gave the following results:

1. Pneumococci were found in 43 per cent. of the eyes when the lacrimal sac had been extirpated.

2. In all but 3 cases the pneumococci were found in both eyes. Therefore we may say that the extirpation of the lacrimal sac reduces the presence of pneumococci in the conjunctiva from 90-95 per cent. before the operation to 43 per cent. after the operation.

3. In smears the pneumococci were found only in 18 per cent. of the cases.

The virulence of the pneumococci for white mice is not very great.

No relationship could be established between the degree of epiphora and the bacterial findings.

The bacterial relationship before and after the extirpation of the lacrimal sac is reversed.

Pneumococci predominate before the operation.

Staphylococci and xerosis bacilli predominate after the operation.

OPHTHALMIC REVIEW. Sept 1912

1. Hydatid Cyst of Orbit, by G. H. Pooley.

2. The Operation of Couching as Practiced in Southern India, by Lieut. Col. R. H. Elliot.

In this paper Dr. Elliot sets forth an array of statistics gathered at Government Ophthalmic Hospital, Madras, S. India, showing the disastrous results of "couching" as practiced by the "vydyans" of that country. It appears that the immediate results of the most favorable cases for couching may be good, but ultimately the most of them, and as he quotes from Major Smith, all of them, go bad.

Dr. Elliot thinks the "native practitioners" couch every dimmed vision eye coming to them, whether due to cataract or other cause, through ignorance, or for purposes of personal gain. While the results of the coucher terminate in blindness in so many cases, the time is not yet ripe for the government to control the practice.

Cataract is very prevalent in India, and it attacks the individual very much earlier in that country, some of its sufferers being in the prime of life.

ARCHIVES OF OPHTHALMOLOGY. Sept. 1912.

1. *Hereditary Optic Atrophy With X-ray Findings, by Wm. E. Bruner, Cleveland.
2. Polyphoidal Formation in the Lacrimal Sac, by F. Tooke.
3. A Case of Chloroma, by R. Sattler, Cincinnati.
4. Amblyopia From Inhalation of Methyl Alcohol, by H. H. Tyson, N. Y.
5. Syphilis of the Orbit. Report of an Unusual Case, by Oscar Dodd, Chicago.

Syphilis of the orbit is among the rare forms of eye diseases, one in 5,000 of all eye diseases. Orbital syphilis occurs in hereditary and acquired forms. Appears as periostitis or gumma of the orbital walls. Its appearance is mostly at the orbital margin near the superciliary ridge. In the periostitis necrosis of bone and breaking down of soft tissues to pus formation may ensue. The history and treatment of a case is given.

6. Recurrent Retinal Hemorrhages Occurring in the Young, With Report of a Case, by A. E. Davis, N. Y.
7. Report of Six Cases of Degeneration of the Cornea in the Same Family, by Dunbar Roy.
8. On the Various Causes of Monocular Diplopia, by E. Woelfflin, translated by Alfred Brann, N. Y.
9. Hemeralopia, by Prof. Hess, translated by M. L. Foster.

*The paper contains many interesting items, some of which are: The X-ray findings of the patient's skull which shows an enlargement of the sphenoidal cavities with increased height of the floor of the brain cavity and a shallowing of the sella tursica.

This condition was present in all the members of the family suffering from optic atrophy where skiagraphs were taken, and does not exist to any marked degree in those of the family not afflicted.

The afflicted nephew, a doctor, became "entirely blind" within one year, and while given Hg., K. I., Thyroid ext., Pituitary extract, Strych., etc., did not get any improvement. One year later the sight began to improve under homœopathic treatment until now he has 1/5 normal vision.

The patient had the sphenoidal sinuses examined but nothing was found to account for the loss of vision.

Wasserman was negative.

Hearing was normal but nystagmus on turning was doubled.

As treatment failed to accomplish anything Dr. Cushing did a sub-temporal decompression, and found an exceedingly œdematous brain with great excess of free fluid in the subdural space.

Four weeks after operation the fields were more contracted but the field of vision was somewhat improved, although it is too early to give any prognosis as to permanent benefit of the operation.

THE AMERICAN JOURNAL OF OPHTHALMOLOGY. Aug. 1912.

1. Circulatory Phenomena in the Eye, by W. H. Luedde, St. Louis, Mo.

2. *A Case of Persistent Paralysis of the Accommodation after Diphtheria, by H. Oloff, translated by A. Alt.

3. A Contribution to the Pathogenesis of Glaucoma, by Dr. E. Fricker, translated by A. Alt.

*Dr. Oloff has found in literature only three cases in which the paralysis lasted more than six months.

His case, a man 20 years old, powerfully and faultlessly built, had normal distant vision O. D., and myopic astig. 0.5 D. in the left. Pupi reaction normal, no diplopia, and except for the paralysis of accommodation, the eyes were normal. The paralysis followed an attack of diphtheria in 1908, and has remained to the present time. All other causes for paralysis were by test, symptoms and history, eliminated. The paralysis is nearly complete.

THE JOURNAL OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY.

Aug. 1912.

1. Systemic Infection Through the Pharyngeal Lymphoid Ring Calling for Surgical Intervention, by C. B. Wylie, Chattanooga.

2. The Importance of Accurate Refraction, by W. H. Crisp, Denver.

3. Eustachian Bougies of Fuse Wire, by J. S. Weaver, Kansas City.

OPHTHALMOSCOPE. Sept. 1912.

1. Studies of the Accommodation, by Alex. Duane, New York.
2. The Mechanism of Accommodation and the Comparative Anatomy of the Ciliary Region, by T. Henderson, Nottingham, Eng.
3. Optical Treatment of Suf. Rectus Paresis, by A. S. Percival.
4. *A Method of Determining the Muscle Balance at the Reading Distance, by Carl Henning, Wash., D. C.

5. On the Mechanism of Accommodation, by Prof. J. Stilling.

*Henning devised a modification of Graefe's "dot and line" by using a "circle and line." In testing muscle balance at the reading distance two things are imperative. To have the vision focussed sharply at N. V., and to break up absolutely the tendency to fusion. This is accomplished by using two 7° prisms, base to base, horizontally placed before one eye and using the "line and circle," a line about two inches in length in the middle of which is drawn a small circle.

When the vision is focussed on the card the white center of the circle appears, and if not focussed the circle appears as a dot. With the vision focussed any lateral deviation may be corrected by offering the proper prism to make the three circles appear in a vertical position.

The Journal of Ophthalmology, Otology and Laryngology

Vol. XVIII

Lancaster, Pa., and New York, November, 1912

No. 11

EDITORIAL.

THE INFERIOR TURBINAL.

GRATIFYING is it to see such a physiologically useful and pathologically baneful a body as the turbinal receives the attention or study which it apparently deserves, which is needed for the welfare of the patient and which we trust will be ultimately appreciated by the mass of the profession.

The article of Dr. Kellogg appearing in this issue receives our highest commendation for the following reasons,—1st, it forcefully directs our attention to physiological need of this body for the protection of deeper portions of the respiratory tract,—2d, reminds us that all enlargements of this body are not identical,—(a) increase in osseous tissue, (b) thickening of the mucosa, and (c) expansion of erectile tissue. 3d, its originality in devising a new, easily learned and performed, nonhypertechnical and, we think after making a few trials, a practical operation for one of these forms of enlargement of the turbinal body.

A fourth form of enlargement should not be overlooked, a true hypertrophy of the lymphatic follicles located on the posterior extremity of the turbinal,—this collection of the follicles are sufficiently numerous to be rightfully given the name of “nasal or turbinal tonsils” by accredited authorities; and such need similar treatment as do the other larger and better known portions of the Waldeyer's Ring. Again the Doctor's third division—enlargement from loss of tonicity or contractility of the venous sinuses may be advantageously subdivided into (a) the chronic relaxation caused by frequent recurrent rhinitis, mechanical irritation, etc., because only amenable to surgical measures such as he suggests, and (b) the more acute or temporary mere local manifestation of General Anemia not infrequently found in young girls at the establishment of menstruation or in women during pregnancy. This latter subclass usually needs no surgical intervention

but is best restored by a general tonic treatment,—possibly Iron, also is it in this class that Ars. alb., Lemna minor and Sang. nit. are most efficient.

Frequently has the galvano-cautery been pronounced inefficient on the one hand and pernicious in its results—in causing a rhinitis sicca—on the other. Is it the cautery, *per se*, or the exact technique? The object to be obtained is the cicatricial adhesion of the mucous membrane to the periosteum of the turbinate bone,—of course the smaller the cautery the better—the writer uses a fine sharp pointed electrode,—thereby cauterizing a very restricted surface but holds the electrode in contact longer than usual in order to make sure of the cauterization attacking the periosteum—believing the ordinary momentary application does not reach deep enough to cause the desired inflammatory adhesion of the periosteum. Granted the pernicious sequelæ of dry or atrophic rhinitis are only too frequently met; but it is due to the extensive surface cauterization with the flat electrode; which technique we think is abandoned by all rhinologists unless it be those endowed with more ardor for brilliant immediate effects than future permanent results; and by our numerous confreres who consider rhinological surgery within the jurisdiction of the family physician.

Turbinotomy versus Turbinectomy. Too frequently and almost universally are these words considered or employed synonymous,—as we recollect our old etymological days, the suffix *otomy* means partial while *ectomy* means total removal. Not uncommon is it to see in print “partial turbinectomy,” *i. e.*, precisely speaking, “a partial total removal of the turbinal”—rather incongruous English. And still **on** account of the confusion of these terms we scarcely blame the **w**riter, as it seems the only certain method of expressing what is termed the conservative operation.

A broad perusal of literature would lead one to believe that true turbinectomy is employed by but few of the less observant rhinologists because those conversant with the specialty's literature have probably profited by the experience of our British confreres during the eighteen hundred and nineties with the Carmalt-Jones spokeshave, at which period turbinals were universally totally ablated. But these surgeons found that about six to eight years after such peration a rhinitis sicca almost always supervened, upon which they abandoned this radical procedure—since which frequent articles may be found advocating conservation of the turbinal—this journal having in 1898 published such a one by the writer.

A NEW PROCEDURE FOR REDUCTION OF TURGESCENT TURBINALS.*

FRANCIS B. KELLOGG, M. D.,

Los Angeles, Cal.

IN the consideration of nasal stenosis, the inferior turbinal assumes a position of importance only secondary to that of the septum. There are many cases in which the septum is normal, or only slightly deviated, but stenosis and mouth breathing exist because of abnormalities of the inferior turbinal bone or membrane, or both. Sometimes the bone itself is so set as to project horizontally or at such an angle across the nasal passage as to seriously impede respiration. These cases are effectively met by the Freer operation which consists of a submucous resection of the inferior turbinal bone. An incision is made behind the lower border of the bone in its whole length. The mucous membrane is then elevated to the top, pushed up into the middle fossa, and held by a cotton pledget. The bone is then removed at its attachment either by a chisel driven from before backward, or by a Bosworth saw passed behind the bone and sawing up and out. The mucous membrane is then replaced and held in position against the stump of the bone to which it becomes attached. Its original support being removed, its new attachment draws it to the outer side of the nasal passage and leaves the latter free. At the same time no mucous membrane is sacrificed except that covering the back of the turbinal.

In another class of cases there exists an actual hypertrophy of the mucous membrane, forming a thick pad of firm tissue which is only slightly shrunk by cocaine or adrenalin. These cases call for the surgical removal of a section of the thickened membrane. The removal of the dependent border of the membrane, either with or without the lower edge of the bone, will give a free passage for respiration along the floor of the nose. The cicatricial contraction will also involve to a certain extent the latter membrane and result in a useful passage.

*Written especially for this JOURNAL.

With the disposal of both of the foregoing forms of abnormal turbinals, there still remains a large class of cases which may be denominated as turgescient stenosis. These find their etiology in the anatomical structure of the membrane with especial regard to its blood supply. As you know, the turbinal membrane is a true erectile tissue. Instead of blood vessels there are blood spaces communicating with each other. It is the function of the membrane to furnish moisture to the inspired air. In order to supply the amount of water necessary for this purpose a large blood supply is called for, hence the vascular arrangement. As the amount of moisture required depends upon changing climatic conditions, a sensitive and elastic nervous mechanism permits the vascular spaces to become quickly engorged and as quickly depleted according to the requirements. This delicately balanced mechanism is frequently thrown out of adjustment with the result that the membrane becomes relaxed and is unable to keep the blood supply under control; in other words, there is a more or less permanent condition of turgescence. In other cases the turgescence is precipitated by the slightest irritation and even by gravity.

Alternating stenosis is a term used to describe this condition when it affects one side and then the other alternately. This is experienced when lying upon the side at night. The stenosis affects the dependent side and shifts to the other when the subject turns over. This troublesome condition has proven a difficult one to treat. The only effective measures seemed those which destroyed the mucous membrane and for that reason have been abandoned.

At one time it was quite popular to cauterize the mucous membrane extensively either with the galvanocautery or with chromic acid. Another method of cauterization, intended to preserve the mucous membrane while setting up cicatrization in the submucous tissue, was to make a long pocket from before backward with a cataract knife into which a long thin cautery blade was inserted and the current turned on. Making longitudinal incisions with a knife was proposed in the expectation that healing would be followed by cicatricial contraction. All of these methods have been abandoned either because too destructive or ineffective.

The last mentioned procedure, viz.: longitudinal incisions was the one which suggested to me the operation which is the subject of this paper. When made with a cutting edge these incisions quickly united, with practically a complete restoration of the cellular structure and

accompanying turgescence. What was needed was something that would destroy a minimum of mucous membrane but secure genuine cicatricial contraction in the substructure.

The very simple expedient of making the incision with a nasal saw suggested itself as likely to accomplish this on the assumption that the rough nature of the cut and its greater width would prevent re-establishment of the blood spaces. This was accordingly tried and the results have been apparently gratifying. I say "apparently" because sufficient time has not yet elapsed to put the work to its ultimate test. During the past six months I have treated a number of cases in this manner and with the following conclusions:

First. In cases of simple turgescence or relaxed membrane it is the most effective nondestructive measure I have ever tried.

Second. The tendency towards re-establishment of the blood spaces shows itself to a limited extent even after this operation and the measure may need to be repeated.

Third. It is less effective in proportion to the amount of hypertrophy. It is therefore more effective in young persons than in adults.

Fourth. It is simple of performance and secures a maximum of result at the expense of a minimum of membrane.

In performance it is my practice to saw through the soft tissue and slightly into the bone. One cut is often sufficient but two are frequently required. There is considerable oozing during the first twenty-four hours. This is held under control by packing. A Bernay's cotton pack which when expanded will fill the space between the septum and the shrunken turbinal will exercise sufficient pressure as the blood supply becomes re-established. In order to prevent the cotton from adhering to the membrane it may be covered with a strip of gutta percha tissue. It should be changed in twenty-four hours and removed entirely in forty-eight.

Auditorium Building.

EPITHELIOMA OF THE TONGUE.*

W. A. GUILD, M. S., M. D.,

Des Moines, Ia.

THE subject is timely because of the prevalence and extreme malignancy of this particular type of cancer and because of the recent enlivened interest in the study of malignant growths in general.

The purpose of this paper is not didactic. There is a purpose in presenting it, therefore no apology or excuse. I hope to promote a healthful discussion and interest in the treatment of this "bête noir" of medical practice.

Time will not permit consideration of etiology. You have had recited to you repeatedly the 57 different varieties of cancer causation, from angle worms to higher education, and with every rising sun another cause is born. It is well that the child mortality keeps pace with the birth of infant ideas or we would be overcrowded in this line.

Scientific medical laboratory men and methods have given, and are giving us to-day, much interesting data and food for thought in the study of cancer. Yet there is extreme dearth of information concerning the actual conditions existing in our patients.

Until the general medical practitioners and dermatologists collect, classify and compare their actual experiences gained from practical experimentation on human subjects, we will be waiting, as we are now, for a specific; while all about us malady inflicted beings are stretching out their hands to us in prayer for help. We must couple the experimental laboratory findings to the actual practical findings of our office and hospitals.

In considering any particular kind of location of malignant growth, it is necessary to consider malignancies in general. In fact, we must consider the "malignant condition" of the patient which permits the development of cancer. Some of you may explain this by the "psora" of Hahnemann.

As are other predispositions or tendencies, so surely is a tendency

*Read before the Bureau of Dermatology of the American Institute of Homœopathy, Pittsburgh, 1912.

to malignant disease inherited. No doubt we all have, originally, a certain greater or less degree of immunity to disease. When from any source this immunity is decreased below a certain point and the exciting causative factor is present we are attacked. The patient having cancer in any form has either a low degree of immunity to start with (inherited tendency), or from various causes suffers a great loss of normally strong immunity.

I will not recite the various predisposing and exciting factors of lessened immunity.

The extreme malignancy of epithelioma of the tongue is peculiar. Wounds and benign ulcerations heal quickly, yet all know of the terribly rapid invasion of this organ.

Its soft vascular structure and supply of proximate lymphatics prove favorable for cellular invasion and metastasis.

Its inaccessibility for treatment is a factor. The disturbance of the masticatory function and the ever present mental picture and extreme worry caused thereby enter into its fatality.

Our inability to get at the bottom of the matter and cope with the growth and the conditions permitting it seems, to me, extreme. The vital forces of the afflicted patient are at a low ebb. The reactive power seems entirely spent; the tumor gains ground by extension and metastasis. The patient, family and friends are helping all these adverse conditions by their infernal suggestion.

Partial excision seems not even to check or hinder the growth, amputation of the tongue and dissection of the glands, although barbarian in nature, does sometimes (when the patient survives the shock) give a few months' reprieve. Yet all surgical efforts eventually prove futile.

The poor unfortunate with epithelioma of the tongue is slighted by medical men, buffeted by the electrotherapeutist, cut upon by the surgeon and tossed about from quack to quack until finally he comes back again to his family doctor for morphine and a death certificate. In all this hub-hub and panic, the patient and usually the doctor permits "that growth" to eclipse all other considerations. We forget the patient in treating his tongue.

I believe the dermatologist the logical man for this work, has but few tongue cases referred to him. I hold that he who assays to treat skin troubles must be most thoroughly prepared in the general practice; the more true when applied to malignant skin troubles. He must

have a keen insight into the conditions and causes behind and beneath the surface. He must be big enough to accept and employ every agency at his command, regardless of its origin or source. He must be bold to take on the new and wise enough to hold to the old. In handling cases he must always employ every spark of that intangible "vital resistance" which, when present, means success, when absent, means failure.

The ability of the patient, and our ability to assist him to "come back" is, to my mind, the greatest achievement. Most anyone can use the scalpel and scissors or apply escharotics or make hypodermic injections; but the truly great medical artist is he who can appeal to the hidden vital reactive power.

It may not be out of place to mention some remedies found valuable in epithelioma of the tongue, in addition to the prescribing of measures for the general care.

Of homœopathic remedies we find Arsenicum, Phosphorus, Gallium, Kali cyanatum, the Calcareas, Mercury, Iodine, Nitric acid, Carbolic acid, Thuja are frequently indicated.

Of nonhomœopathic remedies internally administered Potassium iodine, Nuclein (or combination thereof), Methylene blue, Fowler's solution, Quinine sulphate lead the long list.

For local application Chromic acid pure, Zinc chloride, 50 per cent.; Thuja (tincture) and Gallium (tincture) are all efficient.

Hypodermatically into the tumor and tongue we use: Zinc chloride, 50 per cent.; Methylene blue, saturated solution; Pyrogallic acid and Oil of thuja. The latter has proved very useful in my hands, and I believe it is the best local treatment against increase and metastasis. It can be used only in patients who are strong physically. It is absolutely contraindicated where there is organic heart trouble.

Cataphoresis is valuable. Mercury and Zinc can be applied safely, and Arsenic could be used in this manner if controllable. Fulguration will check the growth but is exceedingly painful.

The use of radium and radioactive elements, if combined with skillful general prescribing and care, should prove to be a great remedial agent. Alone I believe they will pass with many other excellent remedies whose chief fault lay in the fact that too much was expected of them. We can't be lazy and treat cancer successfully.

Orificial surgery and its philosophy should not be lost sight of. Strange as it may seem to some of you, I have found need for its em-

ployment in every case of malignancy which has come to my attention. The patients who respond most readily to the orificial work make the most rapid recoveries.

In my own practice I employ a mixed "vaccine and serum"—a mixture of ideas, theories and experiments, some my own, others borrowed. This is prepared from mixed infectious, tumor extracts, defibrinated blood taken from the patient and serum from other patients who have recovered from similar malignancy. In not a single case where this preparation has been used has there failed to be a marked increase in reactive power. I never employ it alone, choosing to augment its action with whatever auxiliary treatment seems expedient.

We are warranted in experimentation. Our patients welcome advances and want results. We cannot do our full duty nor get results by shirking and referring all the hard cases that come to us.

Medical men have the same "God given right" to use initiative in practice as have our bolder brethren the surgeons.

Let us accept what of good comes to us from the experimental laboratory, make use of all this information together with what we already have. Try the new things no matter whence they come, with the welfare of our patients foremost and fear of criticism forgotten. For humanity's sake and not for plaudits let us strive.

Utica Building.

SYMPOSIUM—PROPHYLAXIS.

CHAIRMAN, HERBERT D. SCHENCK, M. D.

(Continued.)

PUBLIC MEASURES TENDING TO PREVENT EYE, EAR, NOSE AND THROAT DISEASES.

ROYAL S. COPELAND, M. D.,

New York.

IN this land of the free and home of the brave, we do not take kindly to official oversight and governmental regulation. Paternalism is a form of government foreign to the inclinations of every pioneer people. Exercise of the so-called "police power" is resisted to the uttermost and its application is a matter of gradual growth. The degree to which it is enforced in Europe, particularly in Germany, would meet with bitter opposition in this country. The evolution is at work, however, and it is only a matter of time when exercise of the police power may be carried to greater lengths than is now dreamed of even in the mother countries. This power is founded on the duty of the State to aid in the protection of its citizens. It must not be arbitrary or unreasonable in infringing upon the personal rights of persons or corporations, but in promoting the public good the courts will sustain its almost unrestricted exercise. All laws for the preservation of the public health are based on this principle and the extent to which the State may go is limited only by public sentiment.

Since an enlightened public opinion must antedate all efforts to express public improvements in terms of formulated law, it certainly is the duty of an altruistic profession to awaken in the public mind an interest in every possible measure making for the safety of the citizen. If a number of influential persons are convinced of the value of any given device for the safety of the public, the passage of laws compelling its general use will follow as a matter of course. When the public is well aroused the clamor of the multitude hastens the exercise of the police power, even when the "interests," for selfish reasons, may desire nonaction on the part of the State. It is an unfortunate thing

that the patent laws frequently interfere with the common and popular use of some inventions that have in them the possibilities, in certain directions, of almost unlimited increase in the public safety. The patent makes the cost prohibitive and at the same time makes it impossible of any press notoriety because of the natural and very proper objection on the part of the press to give gratuitous advertising to a proprietary article or device. Once in a great while, as for instance the recent presentation of the match patent, the exclusive rights to manufacture and use are given up and the patent is placed at the disposal of the public. It has seemed to me that in this field some great philanthropist has an opportunity quite equal to library building or university endowment.

The fact that nearly a million lives are annually lost in the industrial pursuits in the United States gives an ample reason for some study of safety devices. When there are added to these deaths, the needless slaughter of thousands and the mutilation of other hundreds of thousands, the result of easily preventable causes, it is time we appealed to the police power.

This preamble is introductory to some thoughts I wish to express on the subject of window glass, particularly the kind of glass utilized by the public carriers. It is probable that my experience is paralleled by that of every practitioner, but I am more and more impressed with the terrifying numbers of deaths and serious injuries due to the dagger cuts of shattered window panes. Railroad cars, street cars, subway cars, taxicabs, omnibuses, hacks, automobiles, and every other carrier known to man is an instrument of danger from this common cause. Not a day passes but the public print records an accident of this sort, and never a year goes by but each of us is called to treat the victim of such a disaster.

Within the past five years it has been my duty to give personal attention to a great many persons injured in public carriers by broken glass. Most of the patients I have in mind were met after two terrible accidents. One of these disasters was the head-on collision of two interurban electric cars, both going at full speed. The other was the Grand Central Railroad Station explosion of eighteen months ago. Many persons were killed outright in both these accidents and dozens of others were more or less seriously injured. Aside from a few bruises and broken limbs, almost every patient treated was under medical care for cuts received from shattered glass.

In the Grand Central disaster, there was a surface street car directly opposite the scene. The force of the explosion tipped this car over and killed most of the people in it. Those who escaped immediate death were thrown through the broken windows with easily imagined results. When a window pane breaks, the center falls out, leaving the jagged margins fixed in the frame. Each point is rapier like and as dangerous as a Sicilian dagger. One woman whom I attended had on face and head over seventy cuts of lesser or greater size and depth. Wherever the glass penetrated the tissues, the point broke off, leaving a piece of glass at the bottom of the wound. Both eyes were injured, one so lacerated that it had to be removed. The scalp was riddled and the face peppered with wounds.

Another victim, with a smaller number of cuts, was unfortunate enough to have both eyes destroyed, but happily he died within a few days. Others were similarly, but less seriously injured. As I recall it, the Flower Hospital staff that day attended thirty-five patients suffering with glass cuts.

In the other accident referred to, I remember one man, a personal friend of mine, who had his nose all but severed from his face. Had it been deliberately done with a knife it could not have been a cleaner cut. This organ, hanging by shreds, was skillfully replaced by a colleague and is doing duty today. Fifteen or twenty other people suffered from glass cuts.

It is needless to multiply instances of this sort. Single cases are happening daily, almost hourly.

Every patient I have referred to would have escaped serious injury were it not for the fact that frail and easily shattered glass is in common use by the public carriers. Why is this permitted when there is a glass incapable of breaking under the circumstances mentioned? I refer, of course, to what is called "wire glass."

Holding no stock in the concern manufacturing it, possessing no acquaintance with any individual therein, and having no direct or indirect personal interest in it, I feel free to express my sentiments regarding this product. Observation convinces me that the use of wire glass is rapidly increasing. Most modern elevator shafts are enclosed with this glass, rather than with ordinary or plate glass. The reason for this particular use of wire glass is because it withstands fire much better than other kinds. The great Baltimore fire proved this.

If translucent glass were acceptable the cost would be disregarded,

because the rough wire glass costs little more than ordinary window glass. The polished and transparent wire glass, however, costs from 30 to 75 per cent. more than plain polished plate, and more than twice as much as 32 oz. window glass. It must be admitted that wire glass is more expensive in its original installation and heavier than all plain glass except polished plate. It does seem to me, however, that the added expense of carrying the excessive weight and the added cost of installation would be more than saved by the decreased breakage and the reduction of damage suits for injuries sustained from flying glass. In the end, therefore, the polished wire glass would be a real economy from the standpoint of the public carrier. This glass is nowhere employed, however, as a conservator of human life and limb, because of its nonshattering properties. It is on this account that I wish to advocate its universal employment in the public carriers.

Unfortunately, the cost and weight of this splendid invention have so far prohibited its use. One single railroad is equipping the vestibules only of all its new steel coaches with this glass. Most railroads and probably all common carriers using light weight rolling stock reject it because of its weight. It can never be made of good quality as thin as double thick window glass. The reason for this is because the glass is first cast and rolled in the form of rough glass and is then polished. In attempting to polish down to the thickness of ordinary glass the wire mesh is exposed and the breakage is excessive.*

From the standpoint of the medical man there can be no question of the timeliness of this discussion. The time must come when the police power of the State will compel the abatement of this public nuisance.

*Since the presentation of this paper an article has appeared in *La Nature*, of Paris, under date of August 17th, describing a recent French invention, called "triplex" glass. The Literary Digest of September 28th has a translation of this article. According to this the triplex glass is made in the following manner: "Two sheets of glass are taken and one face of each is covered with a thin layer of gelatin; the sheets, gelatin faces opposite, are placed together, with a very thin sheet of celluloid between. The whole is subjected to hydraulic pressure to make the combination solid. The composite sheet, as it comes from the press, is as transparent, to one who does not know how it was made, as ordinary glass."

I have no knowledge of the expense of this new glass, but undoubtedly it is superior to wire glass where absolute transparency is necessary. The illustrations, showing how triplex glass breaks, indicate results very similar to those we demonstrated with the wire glass at the Pittsburgh meeting.

It is a daily menace to the life, and limbs, and eyesight of every citizen who enters a public vehicle.

In this day of socialistic activity many plans are set afoot for the comfort and happiness of the people. Play grounds and public baths are demanded, and properly so. As regards the latter, however, I wish to sound a word of warning. The Boards of Health advise against swimming in this place or that because of the danger of typhoid infection. I have heard no mention made of the easily conveyed infection of the middle ear from the water of a swimming pool. The infection first involves the nasal passages and then the nasal accessory sinuses are involved, from bathing in a pool or other place where there is not an unlimited and continuous supply of running water. I have myself seen a number of such cases and at least one mastoid involvement directly traceable to an uncleanly swimming pool.

In asserting its rights the municipality may very properly exercise the police power by correcting this evil.

The effect of dusty streets in the production of nose and throat diseases is widely discussed these days. Antinoise societies are being organized for the happiness of mankind. I have no doubt that the incessant clatter and din of the city life are factors in the development of deafness. Their abatement will make for better function.

These are a few of the ways by which the exercise of paternalistic power will reduce the income of the physician and that, I suppose, was the object of the Chairman in assigning the topic. Time permits no further elaboration, so the subject is submitted for your consideration.

58 Central Park, West.

Parenchymatous Keratitis Treated With Salvarsan. Wicherkiewicz tries to say a good word for salvarsan in the treatment of the keratitis of congenital syphilis, but his article is not very convincing, and he does not seem to have accomplished any more than the other investigators. Like others he finds that salvarsan will, in acute and vascular cases, stop the blepharospasm, photophobia and over vascularization quicker than any other remedy. The improvement in vision was so slight in many cases that it might easily have been the result of the other remedies employed. The clearing of the cornea took place mostly at the periphery, the changes in the important pupillary area being slight. In one case, however, the vision improved from R. 0.50 m., L. 2.00, to R. 6/20, inside of a month after two injections of salvarsan. He finds it more advantageous to give several small doses of salvarsan than one large one.—*La Clinique Ophthalmologique*.—Abstr. in *Hahn. Mo.*

PROPHYLACTIC SURGERY OF THE NOSE, THROAT AND EAR.

T. M. STRONG, M. D.,

Boston, Mass.

THE "dull" child is usually the deaf child, and as such becomes of special interest in the family and school environment. The actual conditions existing will often be obscure. It is not always easy to determine where functional defect ends and cerebral incapacity begins, and when associated, treatment of the former may disappoint us by its failure to relieve. On the other hand a margin of loss in function may occur without apparent loss of active intelligence and these cases can be easily overlooked. The family physician was, and with regret it can be said still is, not without blame in this matter of deafness in children, when we notice the apparent indifference with which earache, unless of severe type, is regarded. Pain in the ear, even if transient, should always be considered a danger signal and treated accordingly. The mild transient cases would naturally require no surgical attention, they would be strictly medical, the carefully adapted homœopathic remedy. We are concerned at this point with the ear only, without regard to causative conditions in nose or throat. When we find a more extended area of inflammation with well defined pain but with little or no bulging, or possibly a question of doubt, we believe that paracentesis should be early considered and promptly performed. Of course with marked bulging and all the hall marks of exudation there is no manner of doubt what to do. Done with care and the proper asepsis, with the average skill of those practicing along these lines it can do no harm, even if, perchance, unnecessarily, while a delay of a few hours may mean serious complications. The benefit of the doubt should be given to the incision, rather than to the necessity of the operation. It can be done absolutely painless, in adult or child, as frequently verified, by the application for fifteen minutes of a solution of cocain, menthol and carbolic acid crystals, twenty grains each. The enfolding of the ear in a compress of cotton, shutting off all sound, is as grateful to an inflamed ear as shutting off light from an inflamed eye. In a word operate early.

The demands of the schools for all the mental energy of the child, on the part of the educational authorities, are bringing more and more to the front the physical defects of the scholars, and developing plans to remedy these as far as possible. Among these defects none are more important than deafness; for the effects of this handicap on the later physical, mental, and perhaps moral development of the child, cannot be overestimated. Too much stress cannot be given to the necessity of increasing the facilities for examining the children in our public and private schools, for the neglect or overlooking of these defects are not confined strictly to the ignorant or foreigner. In fact the latter is likely to receive the most benefit since he is under observation to a greater or less degree according to the facilities furnished by the authorities. The tendency is to overburden the limited number of nurses engaged in this work by having too many children under their care, compelled as they are to cover home, outpatient and hospital in their daily rounds. Too much praise cannot be given to the school nurses who labor so faithfully in their line of work, oftentimes giving many hours of overtime work without the expectation of receiving any credit therefor, and they are not disappointed in that expectation. It is already well established that a very large proportion of children under fourteen years of age are more or less deaf, and that a very large proportion of those under one year of age have suppurating ears. This latter class could be so materially benefitted by continuous oversight, but we are apt to see them only during the first days or weeks of the discharge. Too often they cease attendance as soon as the visible evidence of the discharge has ceased. So they are allowed to drift along until in the course of time, there is a new outbreak, the recovery slower, and the damage greater; this may be repeated at longer or shorter intervals for years. Here is where persistent warnings and admonitions only can bring results. Constant visitation and examination alone will overcome this mass of ignorance and indifference. The remedy lies partly in a larger increase in the nursing corps and smaller classes. After suppuration has been established, faithful attention may restore to normal conditions, if seen early. Here again the essential thing is to provide for free drainage, for as we all know nature seldom creates an opening sufficient for this purpose except after repeated attacks, and by that time irreparable damage has been done. When with the discharge we have threatened mastoid involvement, the treatment by all would be vigorous and prompt, that

goes for the saying. It is however the intermediate forms that plague us, the gradations varying from the typical descriptions of the text book. I believe, given our present technique, that it is justifiable to open and clean out the mastoid in every case of persistent middle ear discharge, due attention being given to the quantity and offensiveness, where all the local measures have proven inefficient. This, not on account of possible menace to life from some sudden flare up of infection, but for the future comfort of the patient, and as offering a better chance for the preservation of whatever hearing may remain, and avoid further damage to important parts. With the exception of attic involvement, with its perforation through Shrapnell's membrane, it seems reasonable to assume that the mastoid antrum must be the reservoir supplying the persistent stream. These cases must be treated on broad surgical lines, namely, clean out the source of the discharge.

Intranasal obstructions, enlarged tonsils and adenoids, with the involved lingual tonsillar tissue or the Waldeyer lymphatic ring, are menaces to health in many directions. They are primary influences in the production of deafness and the catarrhal and suppurative forms of middle ear diseases, already referred to. From them come malign influences shaping or deforming facial lines and mouth; the contracted nostril and high arch; malalignment of the teeth—all of these impairing the normal capacity of the lungs, preventing proper oxygenation of the blood, damming cerebral vessels, causing restless sleep, mental hebetude and bodily lassitude. The catarrhal exudate set up by these hypertrophied or other obstructions cause more or less indigestion and consequent reflex conditions. They are undoubtedly portals for the entrance of germs, giving rise to rheumatism and at times to endocarditis; tuberculosis of glands, if not general infection, given the predisposition thereto. Chorea is unquestionably related to the presence of obstructed breathing in some cases, as demonstrated clinically. Also obstinate keratitis and conjunctivitis, errors in refraction and muscular asthenopia, unrelieved by all attempts to place proper glasses, nocturnal enuresis; these and other conditions are well known to all of you, and we but flash the picture for momentary recall and consideration.

The removal of turbinal tissues in the past has been, in many cases rather crude surgery, with the cutting, sawing or forcible removal with forceps. With the advent of submucous technique and increased skill in application, much more satisfactory results can be obtained in many

cases for the better preservation of mucous membrane by further attempts along this line. The inferior turbinal offers opportunities which should be taken advantage of. In these cases it is necessary to elevate the mucous membrane freely, in order to reach well back along the bone and release adhering tissues in this locality, sometimes very close, and to give room for proper removal of bone, especially when the overhang is prominent and the nostril narrow. There is, as we know oftentimes severe reaction following nasal operations, and if too little tissue has been removed the convalescence is prolonged, the dressings more frequent and the ultimate results unsatisfactory. When the enlargement is chiefly due to vascular engorgement or hyperplasia of mucous tissue partial section by the cautery will be sufficient, always remembering that internal treatment is also necessary, even if too often overlooked.

The middle turbinal, that very important part of the nostril, often requires our careful consideration. When large and cystic, congested and sensitive, evidently holding back or preventing free drainage from the sinuses, the decision to remove and that promptly, is not difficult to make. Given, however, the presence of recurring daily periodic fronto-orbital pains; the report of the oculist of muscle and refractive errors, defying connection by glasses, however skillfully applied, and when with this we find the narrow nostril, which is well filled with a small turbinal not overcongested, and difficult to determine whether the sensitiveness is exaggerated normal or reflex, with no relief following the well directed treatment, then the anterior end of the turbinal should be removed without further delay. At times, with these conditions present, there will seem to be so little involvement of the turbinal on which to hang the guilt that we hesitate to decide for operation. But in the majority of cases the results are very satisfactory in relieving pain and tension and giving further relief by enabling the patient to wear comfortably the glasses which before were of no service. The causative relation of obstructive conditions in the nose and headache while appreciated by many has not attained as much acceptance as its importance demands. The Waldeyer ring of lymphatic tissue is the oft told tale of pharyngological literature and it seems superfluous to try to add to it in this assembly. The same rule holds good in adenoids as in the ear, namely, operate early. No matter the age if old enough to be obstructed by extraneous tissue it is not too young to have the same removed with care, to be followed by the proper constitutional

treatment; for these early developed cases are examples, as a rule, of some latent dyscrasia.

Many cases of enlarged tonsils in early childhood could be relieved and permanently reduced by proper treatment without resort to operation. This of course, means time and expense without a positive guarantee of nonfailure, and so they run along from one cold to another until the condition becomes a chronic one when the family or school physician says, "operation." Then they come to the operating room of the hospital, and we get the credit of being "cutters" only, not conservators. Another misdirected effort between specialist and internist. In the meantime degenerated conditions have been set up through the pharyngeal space, which are often neglected by the failure to follow the operation with well considered after treatment, because the operation is considered the only thing needed. Conservative treatment can be directed towards the tonsils which could not apply to the adenoids.

The guillotine will still remove tonsils successfully, notwithstanding all we hear of enucleation. In the pedunculated, prominent tonsil it is still to be considered, being efficient and speedy and thus requiring lighter etherization. In the buried adherent cryptic, easily breaking down tonsil we believe enucleation the better and more satisfactory way. In either case we still have occasions to complete the operation with the punch.

The question of submucous work is still before us with continuing improvement in technique and better adapted instruments; it is nevertheless an operation which requires practice to perform successfully, and is not the slick, smooth, finished article as presented in society papers and text books, in the hands of beginners or the average operator, failing sufficiently to give opportunity for improved technique. Given the clinical facilities for the selection of patients and proper equipment, the operation in skilled hands gives most satisfactory results. The older operations are not yet to be entirely discarded as many cases operated upon in this manner still bear witness.

The surgeon dentist and the rhinologist should go hand in hand for the services of each are mutually needed in many cases. In the evolution now going on, and partly already established, much of the work now performed by the specialist, tonsils, adenoids, cleft palate, etc., will be in the hands of the dentist. In the past the specialist has paid too little attention to the mouth, the dentist too little to the nose and

throa. Many cases of failure in our hands would have turned out brilliant successes had we had the foresight or experience to turn them over to the dentist for proper alignment of teeth and widening of buccal arch. The dentist's work would show up better if in some cases the rhinologist had been consulted for the removal of catarrhal states—the result of obstructed conditions in nasopharynx.

176 Huntingdon Ave.

Postoperative Complications of Suppurative Frontal Sinusitis.—Sieur and Rouvillois (*Revue Hebdomadaire de Laryngologie*) have gathered the following statistics of complications that occurred after the external operation on the frontal sinus: Two hemorrhages, seventeen orbito-ocular disturbances (deformities of the eye-lids, diplopsy, phlegmone of the orbita, atrophy of the nerve head, optic neuritis caused by pyæmia or thrombosis, etc.), three osteomyelitis, two thrombophlebitis and septico-pyæmia, three slight and twenty-seven serious meningitis, in the latter being included extra- and intra-dural abscesses and three abscesses of the brain.

After intra-nasal operation of the frontal sinus encephalitis, meningitis, fracture of the apophysis of the crista galli and other complications occurred. The predisposing moments from the side of the patient are: The "milieu" (in winter there are more infections in a hospital than in summer), age, sex, general condition of the patient (lues, phthisis, infectious diseases, especially scarlet fever), local conditions. (anatomical abnormalities, dehiscences, involvement of other sinuses) and virulence of the affecting bacteria. The predisposing moments from the side of the operator are: Damage done to neighboring organs, infection and incomplete operation.

As prophylactic measures the writers advise the removal of the middle turbinate and of all polyps and the curetting of the ethmoidal cells intra-nasally, before the external operation is resorted to; the latter should always be performed under local anæsthesia, as by the mask and the other appliances of general anæsthesia infection is liable to occur. The trepanation of the bone, the curetting of the frontal cavity and of the ethmoidal cells must be done with utmost care and thorough external and intra-nasal drainage has to be established.

They come to the conclusion that no more post-operative complications of suppurative frontal sinusitis will occur, when the specialists will finally be thorough clinicians while making the diagnosis and perfect surgeons, mastering the most recent technic, while operating upon the patient.—*J. Lar., Rhin. and Ot. Abst.*

THE EXAMINATION OF SCHOOL CHILDREN.

WM. M. MUNCY, O. ET A. CHIR.,

Providence, R. I.

THE period of conservation is upon us, and certainly not the least of its varied forms is that of preventive medicine. Such precedures as detect defects or premonitory symptoms of graver conditions that tend to impairment of health are becoming more and more a part of the physician's daily work.

At no time of life are such examinations as important as during childhood for many obvious reasons. It is then that hereditary diseases or tendencies are most manifest. It is at this time that they run the gauntlet of socalled children's diseases. During the growing period any departure from hygienic laws result in greater impairment, both physical and mental, than the same offense would produce in the adult. And lastly the demands of higher intellectual attainment has reached such a point that it is a question of how much can be accomplished without destroying the object sought, *i. e.*, a citizen of the greatest resourcefulness. They leave our schools to be for many years to come either sources of strength to the community, or a complete or partial charge of private individuals or the state.

The demands for preventive measures have greatly increased during the last fifty years, due to two marked changes in our national growth. In the first place a hundred and fifty years ago we were a rural people with only 3.3 percentage of our population living in the cities; while now we are an urban community of 33. per cent. including vast sections of sparse population. Such urban percentages as Massachusetts, 91.; Ohio, 48.; New York, 72.; Illinois, 54.; and my own state, Rhode Island, 95., give food for thought as to how the school children are to be protected from the danger of unhygienic habits.

The second great change has been in the character of our immigration. In the early years of the republic the English, Scotch, Irish and German people predominated, but of late years the Poles, Italians, Portuguese and Slavic races have answered to the call of our active industrial life. Coming from lands whose social and political life is at variance with our own, it is not strange that we feel the gravity of

proper assimilation. Not only is this true of our cities, but also our rural communities have been deluged with this character of foreign population, until the average status of the "old red school house" has passed away. I know of country schools of but 5, 10, and 12. per centage of children of American parentage.

Such are the conditions. What is to be done to add vigor to the race and leaven the ever growing loaf? If children were always under parental supervision it would be a hopeless task. The public school furnishes the most available point of contact. Here the state, by its police power has the right to examine and recommend to the parents such treatment as may be beneficial. Even more than that; the right when necessary to protect innocent persons, to isolate from school such persons as may carry a communicable disease; segregate others, as in tubercular fresh air schools; or demand an acquired immunity from a certain disease, as in the vaccination for smallpox.

In the cities the boards of health with their medical and clerical staff have easily taken up this work. Their bacteriological laboratories and full knowledge of all localities of contagious diseases, together with an immediate contact with the medical profession has given them a peculiar advantage. Their years of authority over contagious diseases has naturally extended to an oversight of the noncontagious, which, on the whole, has generally been well received by the parents.

However, in smaller communities where the boards of health do not maintain an official staff, this work had much better be undertaken by the boards of education. Most country school boards are fortunate to have local physicians upon them, who naturally serve on a school hygiene committee. The school boards have naturally placed the non-contagious diseases, such as examination of the eyes, ears, nose, throat, for tuberculosis, curvatures and anæmia, generally under the supervision of a trained nurse or school physician.

The systems are legion; many varieties being found in the same state and under various departments of health, education or both combined. I shall not touch upon all the plans nor give a review of what is being done in the various states, but hope that will be brought out by the gentlemen who discuss this paper. I shall simply point out what is being done in a certain little corner, and my personal experience as I have come in contact with school examination.

Three years ago, the schools of East Providence, a town of 17,000 inhabitants, undertook the examination of the eyes under its simplest form. The teachers tested the pupils' eyes for distance only, using the

Snellen chart, and reported all defects to their parents. The instructions were given by the principal of schools, and as far as I ascertained, their tests were fairly correct. As there was, at that time, no state law under whose authority such an act could come, there was some objection on the part of the teachers who did not consider such examinations in their province. Secondly, the parents did not take too kindly to a notice signed by the teachers thinking it not their business to examine children.

The next year I was appointed school examiner, and in order to avoid the above complaint, attempted to examine not only the eyes, but also the ears, nose and throat of every child. The seating of children and ventilation was also considered. There was a feeling of restraint on the part of many of the teachers who considered me the latest of the fads. It was soon found that the pupils were more or less intimidated by the presence of a stranger, thereby taking much longer time in the visual and hearing tests than had been anticipated. Also that the teacher, when properly instructed, could, when she took the work seriously, accomplish just as good results in much less time. Also that the examinations could then be made before, after school and during recess. A record card, as follows, was installed, which is similar to the one Dr. Wells used in Massachusetts.

Public Schools of East Providence, R. I.—Sight and hearing tests. Pupil (name), grade. Sex, date, age. Distant vision, 5 meters, metric system. Distant vision with glasses (if worn). Near point for diamond type, $1/3$ meter. Color sense, N-normal, D-defective. Eyes ache after use? Headache? Scowl? Crosseyed? Red or crusted lids? Hearing (watch, inches). Earache? Discharge from ear? Mouth breather? Found defective, "S," sight 7 or less; "H," hearing 30-50 or less; "D," diseased. Date of notice to parent or guardian. Was notice heeded? Results: Vision. Hearing. Scholarship. Deportment. And columns so arranged to record these conditions of same child in each of the eight grades (or years) of the school course.

It has the advantage of being concise and yet have a place for everything that is generally recorded, including the date of notice sent and response returned.

We used the Globe Optical Co.'s reading chart No. 969, which has the advantage of being scaled in both meters and feet with at one side the percentage of vision when tested at twenty feet, and on the other the number of the line. The teacher recorded on the record card the percentage of vision as, $1/10$, $2/10$, $8/10$. My object in doing this

was that the teacher in coming in contact with the parents and among the older pupils could easily convey the gravity of the defects; at the same time they are easily transferable to the regular systems.

For the near point reading test at 35 centimeters, or 14 inches, the Snellen reading chart was used. I found that every pupil who failed to read the diamond type at 12 to 14 inches decidedly failed to read the 20/30, and generally not as near normal as the 20/50. Therefore unless the reading test is to be used to ascertain the reading range of vision and the punctum proximum, it is a mistake to have it on the test card. I also found that the punctimeter was an impossible factor for the average teacher and a tedious undertaking for a school examiner. If a reading card is used, I would like to suggest that of the late Dr. Charles A. Oliver as being especially adapted to school children. "Each word is composed of three to four letters that are constructed in conformity with the Snellen basis of letter-formation." The letters themselves are cleanly cut, dead block imprints from an etched steel plate made upon a smooth unpolished dead white surface.*

For color sense we started with the confusion worsteds, but found it took considerable time, and that the four cases in the township had already been discovered by the drawing teacher. In its place, as a meager test, I admit, was substituted a red and green line drawn between lines of the reading chart. Thus the teacher in judging distant vision referred to the line above the green, below the red, and so on, covering both tests at the same time.

We did not use the astigmatic chart, which test is now made optional in the new state law. I do not see any advantage to be gained by its use. Our object is to find all cases of defective vision sufficient to interfere materially with his or her progress in school, which is as easily discovered by the tests already made. And as a differential diagnostic test the astigmatic chart in the hands of a teacher is very uncertain.

As a hearing test the watch method is used in Rhode Island. With the teachers examining the pupils, the whispering test is decidedly variable as to standards, and the large space required would make it frequently impossible. Briefly, the teacher, that the pupil may know what he is listening to, holds the watch against his ear, his eyes being closed. Then gradually draws it away until the tick is lost. Then gradually back until the watch is heard, which is the distance recorded in inches for that ear. After testing 25 pupils she strikes an average

*May be obtained of Wall & Ochs, 1716 Chestnut St., Phila., Pa.

of those apparently normal and uses that number for the denominator. The numerator is the actual distance each ear hears it; thus we have a standard allowing the teachers to use their own watch, yet at the same time easily reduced to a common scale.

In reporting adenoids and enlarged tonsils I became somewhat disliked by not a few parents whose physician saw fit to dispute the diagnosis. Since then I have reported all such cases as mouth breathers, which was so obvious as to be beyond dispute. It also allows the family physician to find the cause and thus add to his reputation, which result, I fear, the other method did not always attain. There is no position in which the physician must walk the chalkline of professional etiquette as that of school examiner.

The school examiner on visiting a school looks over the record cards and retests all those who have not come up to standard. The defective ones then receive the following, signed by the medical inspector:

State of Rhode Island.—Department of Education. Notice to parent or guardian. Mr., in accordance with Chapter 725, Acts of 1911, I am notifying you that the examination of shows that there is some trouble with the, which needs the advice of a physician. Signed by Teacher. (This slip to be returned to the teacher.) I have examined Recommendations to the teacher

Last year the return slip showed one-third response, though many did not take the interest to return them.

There were many pupils most in need of attention, who having ignorant and poor parents, it was found impossible to get them to go to any oculist, hospital, outpatient department or optician. As there was some feeling among physicians against having an office and testing children for glasses at the school, no notices pointing to such a method were sent out. However an office was fitted out to which the poorer children were taken for a drop test when we could obtain their parents' consent. I had a feeling that to send an announcement of such an office on the notices sent out might draw patients from the private oculists. However as oculist for the city of Providence, I found very few who could afford to pay tried to take advantage of the city's charity. The congregation of the foreign and poorer children in such a place prevents it becoming an injustice to the private physician. Therefore next year we shall give free examinations under drops one afternoon a week at the office building of the superintendent of schools, using a notice similar to that of the city of Providence.

Even this change will not give the results we had hoped in the beginning. Plans are being made to have a nurse of the District Nursing Association give her services one day a week to the schools. She will take children to and from the school office when drop tests are given and furnish such advice to parents as is deemed advantageous. This will give excellent results with a moderate cost to the town.

At least two reports are sent to the examiner's office annually. One after the medical examiner visits the school, which consists of a list of the defective pupils, their defects, giving the percentage of hearing or vision if such are reported. A second report in June giving a list of notices sent out and the number heeded.

Mouth breathing, discharging ears, pediculoses, anæmia, chronic coughs and adenitis are reported when noticed. The schools are divided into three sections so that at least once in three years an individual systematic inspection for those conditions are made.

Some time during the year the medical examiner inspects the school buildings and grounds with the school committee making such suggestions as seems wise to improve the hygienic surroundings of the pupils. Here a great amount of judgment must be used as to what improvements are to be made. Indeed, very few buildings in this country are ideal, and many far below standard. At least let us see to it that all new buildings are as near perfect as they can practically be made.

The General Assembly of the State of Rhode Island and Providence Plantations enacted May 18, 1911, their first law covering the inspection of schools. I believe this state is the sixth to put in force a mandatory law. The power is here vested in the State Board of Education with the State Board of Health approving of such blanks, record books and rules of instructions as are deemed necessary. The law is in three sections. Part of Section II. states that: "Every superintendent of schools shall cause an examination of the sight and hearing of all children of schools under his supervision, to be made at least once a year by teachers or school physicians, and shall make provision for preserving the record of the examination of such children and for notifying the parents of defects." It is to be hoped that the enactment of such a law will not conflict with the excellent systems already established in the cities by the departments of health. For if the teachers send out notices of a different character and under another department, the parents will naturally be confused. In such instances the departments of education should turn the records over to the medical inspectors appointed by the boards of health thus availing

themselves of a means of notifying the parents that has been established and save much unnecessary labor.

Section I. to stimulate the appointment of medical inspection has the following: "Any town or city providing medical inspection approved by the State Board of Education, shall be entitled to receive annually from the state appropriation an amount equal to one-half its annual expenditure for such purpose, said amount not to exceed two hundred and fifty dollars."

Section III. relates to the State Board of Education, approving proper standards of school buildings.

A general outline of the medical inspection in Providence, a city of 224,326 inhabitants, is here taken from a paper by Dr. Ellen A. Stone, one of the medical inspectors of the city. "Three medical inspectors for the pupils of the regular grades, one inspector for backward children and disciplinary schools, one dental inspector, two oculists and one (now three) nurses."

"The plan of work may be briefly outlined as follows:

"I. Home inspection, or inspection made upon pupils kept at home by parents or sent home from school by teachers because of symptoms pointing to scarlet fever, diphtheria or some other serious disease, as yet not under the care of a physician.

"II. Inspection made upon children sent from the schools to the Health Department at City Hall with skin diseases, sores, ulcers, discharging ears, trouble with the eyes or with any other difficulties that perplex the teachers.

"III. Inspection made at the schools upon children too young to go to the Health Department or unable for some other reason to be sent there."

On visiting the schools "each child is not inspected, but only such children as the teacher may select because she suspects eye, ear, throat or skin trouble, or because the child is pale, has a cough, is very dirty or has lice in its hair, is backward, or has any defect which she may wish investigated."

This or a similar system is used in most of the large cities in the United States. It has one great weakness in that the school teacher is in reality the first examiner and it is upon her interest, too often passive, that so much depends. On the other hand few of the larger communities could afford, even if it were thought necessary, medical examination for every child. All teachers should have a thorough course in applied school hygiene during their training. Very few indeed know anything about lighting and ventilating of rooms, or seat-

ing of pupils, let alone testing of vision and hearing or a knowledge of the flaming signals of noncontagious diseases. For this the method of education is more at fault than the teachers themselves, and steps should be taken to see that they are taught, if not at normal college, at least by the medical inspector later. I have found when properly instructed that they are fully capable to make the preliminary examinations. The systematic report of the yearly examination to the medical inspector when he visits the school would bring to his attention not only the markedly defective but also the questionably normal.

Such a method was intended in the enactment of the present state law, which will demand a hearty co-operation on the part of the board of education with that of the board of health. The school oculists have an office in the fourth ward room where children bringing the following notice are examined on two mornings and two afternoons a week:

Health Department.—To I have examined who attends school and find that there is trouble with the eyes. The trouble is bad enough to interfere with school work, and on account of it the child may not be able to keep up with the class. The child should be examined by a skilled eye doctor, who will probably have to put some drops in the eye and examine the eye in a dark room. It is usually not possible in the case of a child to find out what is the matter with the eyes or to fit glasses, without examining them in this way, though it may sometimes be done for grown people. *If you are able to pay, you must take the child to your own eye doctor.*

People who are too poor to pay a doctor may go to the physician who has been provided by the city. This is *Dr. Wm. M. Muncy, Fourth Ward Room, Police Building, 151 Fountain St.* The hours are *2 p. m. till 3 p. m. on Wednesdays and Saturdays.* Medical Inspector of Schools. Some *older person* must go with the child and *this paper must be taken to the doctor.*

One of the school nurses assists the oculist, and in visiting the homes of the children not only request their attendance at the clinic, but often bring them, especially where there is no one to come with the children. Besides prescription for glasses, various diseases of an acute nature are treated, while the graver cases are referred to some one of the out-patient departments of the city hospitals. A record is kept of all cases treated, and the following notice sent to the office of the Board of Health:

Health Department.—I have seen of school. In my opinion the case is one of Advice: Glasses to be worn

all the time. Glasses to be worn all the time in school and at home for reading and "close work." oculist.

The latter office sends the following to the principal of the school:

To the Principal: school,, a pupil in your school on the advice of the medical inspector of schools, has been to the oculist of this department for examination. The advice of the oculist is Yours truly, Charles V. Chapin, Superintendent of Health.

Arrangements are made with a local optician by which glasses are procured for the school children coming from the school office at a much reduced rate. Also where parents are not able to procure them the United Charities Association investigate the case and either pay for them at a complete loss or are reimbursed in the installment plan, the money being paid to their nurses.

When this paper comes to press I hope to have attached the annual oculists' reports of Providence and East Providence.

One fact in particular has been brought to my notice this year in that so many children of foreign parentage have interstitial opacities of the cornea, not easily detected except by the ophthalmoscope. So marked was some of these but recently landed on our shores that the best vision obtained was 20/75. I hope next year by the assistance of the school nurse to test all immigrant children, that the data thus obtained may in time cause more drastic measures to be evolved, preventing the landing of such visual derelicts.

The question of school examination is not, as some would think, revolutionary, but evolutionary. This accounts for the varied and on first appearance almost opposite methods of procedure springing up in various communities. On closer examination, I think you will find that they are common in that they make use of the most available materials whether it was the Board of Education, Board of Health, City Medical Society, or Nursing Association. In fact some of the most successful ones have been the combined efforts of a number of them.

As it is evolutionary, the ultimate end of school inspection is somewhat unknown. The school system is interesting itself in the play of the child, the vacation of the child, the work of the coming men and women as manifested in industrial and manual schools, and medical inspection as it comes in contact with all this carries us into fields of speculation as to a great social uplift.

23 Waterman St.

SOCIETIES.

XVII. INTERNATIONAL CONGRESS OF MEDICINE.

London, Aug. 6th to 12th, 1913.

Section XV. Rhinology and Laryngology.

Officers, President, Sir St. Clair Thomson.

Acting Secretary, Douglas Harmer, 45 Weymouth St., London, W.

PROGRAM.

Recent progress of endoscopic methods as applied to the larynx, trachea, bronchi, œsophagus and stomach. Prof. G. Killian and Prof. Chevalier Jackson.

"The methods and results of treatment of diseases of the throat, nose and ear by salvarsan and other arsenical compounds." Prof. P. Gerber and Dr. André Castex.

"Indications for and relative values of tonsillotomy and tonsillectomy." Prof. H. Burger and Dr. J. L. Goodale.

"The special treatment of the throat, nose and ear during the active stages of certain infectious fevers, namely, scarlet fever, measles, German measles, mumps, influenza, typhoid, whooping cough, smallpox, chicken pox, erysipelas, anterior poliomyelitis and cerebrospinal meningitis (diphtheria excluded)." Dr. Victor Delsaux and Dr. E. W. Goodall.

"The pathology and treatment of malignant growths of the nose and nasopharynx (fibroma to be excluded)." Prof. G. Ferreri, Dr. H. Marschik and Dr. E. Lombard.

Also several papers,—titles not given.

MUSEUM.

This will include specimens, macroscopic and microscopic and other exhibits to illustrate—

1. Neoplasms of the nose, accessory sinuses and nasopharynx (excluding mucous polypus).

2. The rarer forms of laryngeal tumors, including postericoid carcinoma.

3. Diseases of the trachea and bronchi.

Also an exhibition of instruments to illustrate recent improvements.

Section XVI. Otology.

Officers, President, Arthur Cheatie.

Acting Secretary, Sydney Scott, 130 Harley St., London, W.

PROGRAM.

"The methods and results of treatment of diseases of the throat, nose and ear by salvarsan and other arsenical compounds." Prof. P. Gerber and Dr. André Castex.

"Nonsuppurative diseases of the labyrinth." Prof. Gustav Alexander and Prof. Karl von Eicken.

"The special treatment of the throat, nose and ear during the active stages of certain infectious fevers, namely, scarlet fever, measles, German measles, mumps, influenza, typhoid, whooping cough, smallpox, chicken pox, erysipelas, anterior poliomyelitis and cerebrospinal meningitis (diphtheria excluded)." Dr. Victor Delsaux and Dr. E. W. Goodall.

"Climatic and occupational influences in diseases of the ear." Dr. Clarence J. Blake and Prof. Guiseppe Gradenigo.

MUSEUM.

This will include specimens, transparencies and other exhibits to illustrate the anatomy, physiology, pathology and surgery of the labyrinth.

Effect of Salvarsan on Luetic Ocular Affections. E. Seidel treated 12 cases (9 acute, 3 quiescent) of interstitial keratitis with intravenous and subcutaneous injections of salvarsan. In only two of the acute cases was no satisfactory result obtained. In one of them the other eye, too, became affected; in both however the disease ran a mild course.

No result was obtained or expected in the three quiescent cases where salvarsan was used as a prophylactic. Six cases of iritis (2 acute, 2 relapsing, 1 chronic with plus tension, 1 nonluetic, but with a luetic history) were also subjected to the treatment. In only the acute cases was a favorable result obtained.

In two cases of palsy of the ocular muscles no cure was effected. In a case of bilateral choked disk of doubtful etiology and one of old chorioiditis the only improvement noted was in the general condition.—*Græf's Archiv. f. Ophthal.*—Abstr. in *Hahn. Mo.*

HOMŒOPATHIC MATERIA MEDICA AND THERAPEUTICS.

DEPARTMENT EDITOR, PHILIP RICE, M. D.,

San Francisco, Cal.

Baryta Carbonica and Calcarea Carbonica.

PHILIP RICE, M. D., San Francisco, Cal.

Between these two remedies a clear differentiation is often very difficult. To some extent they are alike in temperament, and to a marked extent they are similar in their symptomatologies, especially in so far as they deal with abnormalities of childhood. Both have a leucophlegmatic temperament; both have light hair, grey or blue eyes, pale skin; both have crusta lactea, eczematous and other eruptions about the head, eyes, ears, mouth and nostrils; large abdomen, enlarged tonsils and lymphatic glands.

They differ greatly, however, in what may be termed the primary state. Baryta carb. presents a condition of, or bordering on arrested development. That is to say, embryonic characteristics are carried on into after life. These may, in fact, usually pertain to both the physical and mental state, though it may happen that they are more marked in one sphere than in the other. A child may have at ten years of age attained to quite a normal physical growth but exhibits a decidedly infantile mentality; will be utterly unable to learn even simple things, and in other ways manifest mental incompetence. This is very characteristic of the remedy. This type of child is more often found among the lower classes than among the upper, and for it baryta carb. will often work wonders. When syphilis enters into the consideration with this class of cases then bandiaga must be taken into our reckonings.

The calcarea carb. child is usually more than ordinarily bright and clever, and is invariably large for its age. It is when well a most attractive child, whereas the baryta child is never so.

The virtue of baryta in lymphoid enlargements has by no means been overstated, but there can be no question about its having been very much misused. It is the only remedy ever thought of by many in this condition; and, of course, its routine use is attended with failure more often than by success. This is unquestionably a serious mistake and one for which there is little excuse. Those who profess to know something about the law of similars surely cannot defend any such practice on any rational grounds. Personal experience leads me to give to calcarea a higher rank in this condition than to baryta. My results have been uniformly better with it; due entirely to the class of my patients. Having no clinic work the baryta patient is less often seen than the calcarea patient. But personal experience is not a sound basis

upon which to build a therapeutic system, and the fact that calcarea has proved more helpful in adenoids and enlarged tonsils is not mentioned with the hope of securing for it a higher place than baryta has, but for the purpose of discouraging the inexcusable routinism in prescribing of which so many are guilty.

Baryta cannot cure a calcarea condition, nor can calcarea cure one for which baryta is the similimum. In order to cure each must be planted in soil appropriate to its own peculiar powers, and this will not infrequently be more clearly exhibited in the objective or temperamental expression than in the subjective.

Allium cepa is the best remedy for influenza when the eyes are affected with the coryza and when it has a tendency to extend to the larynx. For headaches over eyes so common in severe colds lycopodium and sulphur are indicated.

Silicea, and particularly the calcarea silicea, in scrofulous patients with thick yellowish discharge and obstruction of nose and loss of smell.

Ammonium phos. Sneezing and excessive running from the nose and eyes *only in the morning*; after which a deep rough cough supervenes, with greenish expectoration; then again the sneezing. Coldness at the least draft of air; rose colored sediment in the urine.—*Pacific Coast J. of Hom.*

Petroleum. People with light hair and eyes, sallow complexion, decidedly sickly in appearance, with pimply, crusty, itching eruptions; dry, scaly eyelids; cracking in the canthi, nostrils, around ears, finger tips; who are specially aggravated by cold and in cold weather require this remedy. The auditory canals will be found to be dry and often fissured; the drum membranes dry and retracted, and there will be more or less constant itching in the ears; the Eustachian tubes will be occluded, and with this the usual sensation of fulness and noises of various kinds. In severe or old cases there will be found often a marked tendency to suppuration. In this stage it is very frequently entirely overlooked and Hepar prescribed instead, with, of course, imperfect results.

JOURNAL CLINIC.

Edema of the Eyelids in Children. In discussing various difficulties of diagnosis encountered in children, the author calls attention to the fact that there are four conditions in which this symptom may be met with. The first two are chronic nephritis and the rare cases of congenital edema of the lids. The condition is also an early symptom of rheumatic pericarditis. In fact, it often appears before any other sign, unless it be an increase in the rapidity of respiration. In the three conditions just mentioned the edema is more marked in the upper eyelids, but in a fourth condition, whooping cough, it is more often in the lower lids. As it appears sometimes before the cough it may be of assistance in the diagnosis. The author tells of the case of a boy brought to him because of loss of appetite, and who had no cough, but exhibited the symptoms above mentioned; a week later he developed the characteristic whoop.—Thursfield, *Birmingham Medical Review*, Birmingham, England.

Nasopharyngeal Antisepsis.—Paul Gallois directs attention to the importance of combating all forms of infection of the nasopharyngeal mucosa, not only because of the readiness with which disturbances of neighboring structures, such as middle ear, mastoid, anterior nasal mucous membrane, accessory nasal sinuses, lacrimal apparatus, conjunctivæ, lid margins, etc., may arise; but because many disorders reacting on the system, as a whole, such as rheumatism, endocarditis, nephritis, chorea, erythema nodosum, pneumococcic peritonitis, empyema, thyroiditis, osteomyelitis and many others, may have their inception in infection of the nasopharynx.—*Archives Généralés de Médecine*, Jan., 1912.

Enuresis.—Where no other cause can be found for enuresis have the child's refraction tested. Cases are on record in which enuresis has been completely cleared up by correcting a hyperopia or compound hyperopic astigmatism. One such case occurred in the writer's practice four or five years ago, in which there was 4.50 D. of hyperopia. After the first two weeks' wear of his glasses the boy had no more bed wetting. Refractive errors are not a frequent cause of enuresis, but it is well to keep them in mind.—*Iowa Hom. J.*

For laryngeal edema tracheotomy may be necessary should local applications of pituitary, adrenal or cocain preparations fail to give prompt relief.

Diagnosis of Carcinoma by Means of Urinalysis. Salkowski has found that the nitrogen content of plumbic subacetate precipitate

amounted to 1.22 per cent. of the total nitrogen in normal cases, while in the urine of the cancerous it amounted to 3.03 per cent. as the average of ten examinations. The highest amount found in cancer was 4.62 per cent. The greatest amount in normal cases never reached the minimum amount in cancer. Whether this high relative nitrogen content of the precipitate is actually pathognomonic of cancer, must be demonstrated by control tests in other diseases.—*Abstr. Zentralbl. f. Gyn.*, 1911, 734.

Test for Unilateral Deafness. E. P. Fowler uses a piece of rubber tubing or, better, an otologic auscultation tube or a stethoscope with one earpiece stopped up if it is a double instrument. One end of the device should be inserted into the patient's ear, using care to prevent any occlusion of the lumen of the tube or ear. The other end should be held a few inches below and in front of the operator's mouth and a fine column of air blown through the lips into and across the extremity of the apparatus thus adjusted; across the bell if a stethoscope is used. The blowing will produce a loud confused roaring in the hearing ear and will prevent this ear from detecting any other sounds. If, while this is operating, a third person talks or shouts into the ear under examination the patient will hear the shouting only if the deaf ear possesses some power of sound perception. This simple device will cut off all perception of sound by air or by bone conduction; this may be proved by using a double stethoscope in normal ears, and across into the bell.—*J. O. and O.-L.* abstr.

Transillumination of the mastoid before operation often gives an idea of the position of the lateral sinus.

A false astigmatia may be elicited upon examination if a cycloplegic has been instilled during a wait in the office. At a second or third visit the findings are apt to be different.

Repeated retinoscopic tests may show undoubted astigmatia when the patient can not choose between spheres and cylinders.

CURRENT LITERATURE.

DEPARTMENT EDITORS.

WM. McLEAN, M. D.,
New York.

FRANK O. NAGLE, M. D.,
Philadelphia.

THE AMERICAN JOURNAL OF OPHTHALMOLOGY. Sept. 1912.

*1. A Clinical Report of Three Cases of Retinitis Carcinata. H. L. Begle.

2. A Rubber Shod Eye Cup. John Green, Jr.

3. The Iodide Collyria in the Treatment of Cataract. M. Chevalereau (translated by A. Alt).

*1. Retinitis carcinata was first described by Hutchinson in 1876 and is a rare condition, Fuchs having seen but eight typical cases in 70,000 patients. De Wecker reports but fifteen cases in 140,000 patients.

A knowledge of the etiology and pathology is meagre, but many cases are associated with arterio-sclerosis and retinal hemorrhage.

Dr. Begle describes carefully three cases he observed at the University of Munich Eye Clinics.

OPHTHALMOLOGY. Oct. 1912.

*1. The Newer Operations for Glaucoma, by L. Webster Fox.

*2. Unilateral Glaucoma from Congenital Malformation, by Dr. L. Dor.

3. The Technique and Mode of Action of the Recent Operations Proposed for Retinal Detachment, by P. Bettremieux.

4. A Case of Tumor of the Pons-Cerebellar Angle, by M. Davis and J. Geerts.

5. Leproma of Iris Cured by Radium Therapy, by J. de J. Gonzales.

6. A Resumé of the Present Operative Treatment of Trachoma with a Description of the Author's Method of Grattage with Strips of Sterilized Sand Paper, by D. H. Coover.

7. Recurrent Third Nerve Paralysis with Report of a Case, by J. F. Klinedinst.

8. The Optometry Question, by L. Stricker.

9. The Axis Objectively in Retinoscopy, by W. L. Pannell.

10. Guarded Prognosis in Injuries to the Cornea, by F. Jacobi.

11. The Intracapsular Cataract Operation from the View Point of an Assistant, by J. W. Millette.

12. Revolver Bullet in the Chiasma, Consecutive Binocular Blindness, by J. M. Roy.

13. Homœopathy in Ophthalmology, by D. A. Strickler.

14. Recurring Neuritis, by H. Terlinck.

15. Malingering (Pretended Blindness), by F. C. Todd.

16. Some Clinical and Pathological Aspects of Glaucoma. A Retrospect of 200 Cases, by F. Tooke.

17. Vision in Relation to Marksmanship, by Surgeon U. S. N., E. J. Grow.

18. A Course in Ophthalmology at Univ. of Colorado. (Edit.)

*1. Dr. Fox in his article describes the operations devised and recognized as of value since Dr. De Wecker made his report to the French Ophthalmological Society in 1901. He describes the operations for the relief of glaucoma devised by Major Herbert, M. Bishop Harmon's twin scissor operation, the Heine cyclodialysis method, the La Grange operation, the nonperforating operation of Bettremieux and the Fergus-Elliot trephine operation.

*2. Patient aged 40 stated that he saw well with the left eye until 30 years old, and no pain ensued at the time of blindness.

When Dr. Doe examined him the eye was stony hard with a corneal disturbance through which could be seen as through a strainer, debris which appeared to consist of cortical crystalline matter. An incision was made and lens matter was demonstrated. The lens debris was removed.

After healing occurred a complete aniridia presented, also a very deeply excavated papilla, supposedly due to the glaucoma.

The congenital malformation was a series of longitudinal depressions on the left side of the face corresponding to the imprint of the fingers of the left hand, from the hair line above the forehead to the cheek.

THE JOURNAL OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY.

Sept. 1912.

1. Refraction and the Use of Cycloplegics with Especial Mention of Hyoscin, by C. M. Harris.

2. Trifacial Reflexes with Special Reference to Diseases of the Eye, Ear, Nose and Throat, by A. H. Andrews.

THE OPHTHALMIC RECORD. Sept. 1912.

1. A Supervised and Systemic Study of Ophthalmology, by E. Jackson.
2. Tonometry; with a Description of a Tonometer, by H. S. Gradle.
3. Hemianopsia of Luetic Origin, with Partial Recovery, by W. E. Bruner.
4. Phlyctenular (Eczematous) Conjunctivitis and Keratitis with Special Reference to Etiology and the Value of Tuberculin as a Diagnostic Agent: Together with the Report of Forty Cases, by A. E. Davis and H. Vaugan.

J. OF LARYNGOLOGY, RHINOLOGY AND OTOTOLOGY. Oct. 1912.

1. The Operative Treatment of Labyrinthine Vertigo in Nonsuppurative Disease of the Internal Ear. William Milligan.
2. The Technique of Regional Anesthesia in Rhinolaryngology. Jules Broeckhaert (translated by Dan McKenzie).
3. A Case of Acute Cerebrospinal Meningitis of Nasal Origin. H. L. Gregory.

OPHTHALMOSCOPE. Oct. 1912.

- (1) A Case of Ulcerative Keratitis Caused by the Bacillus of Diphtheria. Leslie Buchanan.
- (2) The Nasolacrimal Canal; the extent to which it is formed by the Maxilla, and the influence of this upon its caliber. S. E. Whitnall.
- (3) Tubercle of the Choroid in Tuberculous Meningitis. Wilbur B. Marple.
- (4) The Sliding Flap Operation for the Removal of Cataract. A. van Lint.

(5) A Case of Parinaud's Conjunctivitis due to Animal Infection. P. H. Adams.

(2) The medial (nasal) wall of the lacrimal canal is formed by the lips of the sulcus lacrimalis of the maxillary bone, and (normally) by the descending process of the lacrimal bone articulating with the lacrimal process of the inferior turbinated bone.

In 31 out of 50 adult specimens the edges (lips) of the sulcus were 4 mm. apart. In 7 instances (out of 50) the lips of the sulcus met and fused, the maxilla thus alone forming the central part of the canal leaving only a small part of the medial wall above to be completed by the lacrimal bone. This wall was ridged right across by the crista.

lacrimalis with which the inferior turbinated bone articulated. While in six of these seven bones the canal, as a whole, was much narrower than in the other specimens, four of them presented a decided constriction of the lumen in the central part. Such a duct might be pervious but would be occluded upon slight cause. In one case this condition was found on both sides of the skull. In 43 of the cases no definite narrowing of the canal was found. Of twelve other skulls where the lacrimal bone was rudimentary or absent seven presented shallow lacrimal fossæ with markedly narrow nasolacrimal canals.

(5) The boy, seven years old, was always playing with a dog whose eyes had been noticed to be "messy."

An organism morphologically identical with Friedländer's pneumobacillus was obtained from the dog's eye and also from that of the boy. Four months later the preauricular gland was opened and found full of yellowish necrotic material. Culture proved sterile, but the same organism as before was present in smears of the discharge. After this the eye condition rapidly quieted down, but by the middle of April the follicles had almost gone and the ocular still had a gelatinous look and was yellowish-brown in color. The opened gland did not close for two more months. The successful treatment was an unfiltered 3 per cent. solution of methylene blue rubbed into the lids with wool on a glass rod. Argyrol, perchloride lotion, autogenous vaccine, silver nitrate, copper and zinc sulphate were tried with no results. The author considers this disease is a lymphadenitis of the conjunctiva, "which may be caused by any organism if inoculated in the right region, which might easily be done by a prick from the hair of an animal."

THE LARYNGOSCOPE. July, 1912.

Presentation of Cases of Plastic Surgery. Joseph C. Beck.

A Case of Otosclerosis, with Pathology. Alfred M. Amadon.

Physiology of the Cochlea. Ernest DeWolfe Wales.

Bacteriemia in Its Relation to Purulent Otitic Disease. J. H. Guentzer.

Report of Case of Mucocele of the Frontal Sinus with Dilatation. Gaylord C. Hall.

Fibroma of the Nose and Nasopharynx with Sudden Malignant Degeneration. Virginius Dabney.

Circumcision of the Uvula. Harold Hays.

An Unusual Case of Elongated Uvula. Charles W. Kollock.

Prognosis and Treatment of Tuberculosis of the Larynx. W. Freudenthal.

Special Editorial Department. The Deaf. Their Education. Improvement of Condition, etc. John Dutton Wright.

August, 1912.

Contribution to the Pathology and Clinical Diagnosis of Status Lymphaticus. Gerhard Hutchison Cocks.

An Operation for the Reduction of Redundant Alar Cartilages. John Leshure.

Vincent's Fusiform Bacillus. Experimental Researches. Francis Lasagna.

A Case of Scleroma. Samuel Iglauer.

A Case of Lingual Thyroid. George Fetterolf.

Acute Inflammation of the Thyroid Gland. Otto J. Stein.

Black Hairy Tongue (Lingua Villosa Nigra). Report of Two Cases. William Wesley Carter.

Neglect of the Trachea. John A. Thompson.

Adductor Paralysis of the Left Vocal Cord Due to Mediastinal Tumor, with Skiagraph, Cornelius Doremus Van Wagenen.

Diseases of the Labyrinth with Special Reference to the Fistula Symptom. Frank R. Spencer.

New Light on the Hypophysis Cerebri. Irving Wilson Voorhees.

Note on the Use of Alcohol in Accessory Sinus Disease. S. H. Lutz.

An Adjustable Open Speculum. Harris P. Mosher.

Automatic Tonsil Suturer Demonstrated at Docent's Verein, Austria. L. J. De Swarte.

A New Lock for the Nasal Wire Snare.

BOOK REVIEWS.

THE TREATMENT OF SHORTSIGHT. By PROFESSOR DR. J. HIRSCHBERG, GEH. MED. RAT., in Berlin. Translated by G. LINDSAY JOHNSON, M. D., F. R. C. S. With twelve illustrations. Rebman Company, 1123 Broadway, New York. Price, \$1.25.

A very interesting and fluently translated monograph of one hundred and twenty pages on this frequent occurring and important abnormality is this book. It clearly shows the thoroughness and great attention to every detail which is so characteristic of our German scientists.

The subject is treated of under the following headings: 1. The cornea. 2. The lens. 3. The vitreous. 4. The fundus background. 5. The pole of the fundus. 6. The optic disc. 7. The optic nerve, pit and ring. 8. Glaucoma. 9. Detachment of the retina.

Speaking of the operation for myopia—*i. e.*, the removal of the lens in order to convert a highly myopic eye into one approximately emmetropic, the author says (and italicizes): "But even today this myopia operation belongs to the most responsible operations of the ophthalmic surgeon;" and more than once does he urge the great care which must be exercised in selecting suitable cases for such, mentioning that "it is only permissible in the highest degrees of myopia (over 15 D), and even among these cases only a small number are suitable."

While the final chapter is devoted to a very practical consideration of the various methods or ways of prevention or prophylaxis of progressive myopia in childhood,—one of the most vital questions for the ophthalmologist on account of the very rapid increase of this condition at the present time.

The type and general make up of the volume is exceptional but for study a less glossed paper would be far easier upon the eye.

ON THE PHYSIOLOGY OF THE SEMICIRCULAR CANALS AND THEIR RELATION TO SEASICKNESS. By JOSEPH BYRNE, A. M., M. D., LL. B. J. T. DOUGHERTY, New York. H. K. Lewis, London. MDCCCXII.

In this volume the author gives most minutely his exhaustive investigation of both the long hidden physiology of the semicircular canals and his theory of seasickness. This 600 most closely composed pages comprise the full premises—(a) observed facts, (b) observed conditions, (c) experiments on animals, and (d) experiments on man—from which he logically and convincingly deduces his, at present, novel theory that the primary etiological factor of seasickness is located in the semicircular canals, while the irritations of ocular or digestive functions, the circulation, etc., merely contributory and secondary. Sev-

eral very minute records of the pulse rate, blood pressure, chemical analysis of gastric contents after test meals are given of persons during attacks of seasickness.

From the chapter on Etiology we quote:

"The cause in the cases of seasickness is to be found in functional labyrinthine disturbances, due directly to the boat's motions, and producing in turn effects in the manner which we shall now endeavor to elucidate. . . .

"It has been shown that the phenomena attending rotations, aural irrigations and galvanism applied to the mastoid areas are identical with the Flourens phenomena that follow section or destruction of the semicircular canals in animals. Numerous observations on the circulatory and gastric functions, as well as a comparison of the objective and subjective symptoms, show an undeniable similarity between the phenomena of seasickness and those produced by rotations, aural irrigations and galvanism. The only difference is in the degree and in the mode of production."

The completeness of the book may be judged by noting that all the theories of this widespread and distressing malady from Hippocrates down to the most recent and scientific are collated—with criticism showing the fallacies in some of the latter,—and over two hundred authors are quoted in two hundred and eighty-eight references.

The reviewer believes that the perusal of this book, by affording the reader the explanation of the true etiology of seasickness, will accomplish the object of its author, in giving the student or physician a better understanding of this disagreeable disease and thereby pave the way for some method of alleviating this unspeakable human misery.

CLINICAL GUIDE. By GEORGE FREDERICK LAIDLAW, M. D., Professor of the Practice of Medicine, Visiting Physician to Flower Hospital and Visiting Physician to the Metropolitan Hospital. Compiled for use in Dr. Laidlaw's Clinic in the New York Homœopathic Medical College and Flower Hospital. Cloth, 151 pages, \$1.50, including Postage. New York: Boericke & Runyon. 1913.

Why is this valuable book commended to our readers? Because the specialists as well as the general practitioners among them will all find something of value even if most of its contents do not appeal to the individual. Professor Laidlaw, whom we have known for many years, is exceptionally gifted as a teacher with a broad grasp of his subject and a wide experience. Tuberculin therapy is very clearly set forth, a unique and complete glossary describing each of the numerous preparations of tuberculin. The author not only criticises tuberculin therapy as usually used but details his method of, and indications for, administering it which is manifestly an improvement—one that we predict will be adopted.

"Calmette's conjunctival reaction should be abandoned or restricted to veterinary practice. The skin test is safe but not conclusive."

"Do not inject tuberculin in patients with pulmonary tuberculosis with hemorrhage or fever reaching 101° F. or in one who is losing weight and strength rapidly. The usual therapeutic dose will then aggravate the disease."

Dr. Laidlaw gives one sufficient dose—it is no specific for tuberculosis—and does not repeat the dose if weight increases, and so long as the feeling of increased strength or well-being persists.

Denys' method—"Bouillon filter"—appears here (his technique and rules) for the first time in the English language.

It is interesting to note that Koch, in his last method, advises an initial dose of five millionths of a milligramme of tuberculin—equivalent to our 6th decimal dilution. Professor Denys dilutes his bouillon 1 to 10,000,000, which is the seventh decimal; he himself figures that "thus the dose of microbic excretion must be much less than one ten billionth part of a gramme." He then goes on: "However, in the treatment of tuberculosis, if one wishes to avoid violent reactions it is necessary to employ these minute doses. A priori one would deny that they had any activity. Nevertheless, in sensitive tuberculous patients, they have undeniable effects." Shades of Hahnemann!

The book under review—which is practically the author's office memorandum book of diagnostic items and tests, some of the data not yet available elsewhere in English—covers Urine, Gastric Contents, Blood, Typhoid Diagnosis, the Laboratory Diagnosis of Syphilis, Smears and their Staining, Sputum, Tubercle Bacilli, Diagnostic Puncture, Cyto-diagnosis, Takata's Oral Auscultation, D'Espine's Vertebral Auscultation, Auscultory Topographic Percussion, Percussing the Apex of the Lung, the Rectal Bougie, Fibrolysis, Test Diet for Diabetes, Case Histories, and Stocking the Laboratory. The index occupies 12 columns.

A book that should be in every up to date physician's library. We have found only one typographical error; page 19, line 5—1 cc. should be O. 1 cc.

MEDICAL DIRECTORY OF NEW YORK, NEW JERSEY AND CONNECTICUT.
Published by The Medical Society of the State of New York. Volume XIV. 1912.

This volume, a little thinner than that of last year, contains the names of 17,764 registered physicians (an increase of 140). New York State has 13,696 (a gain of 55); New Jersey 2,674 (92 more than a year ago), and Connecticut 1,394 (a loss of 7). Of the 7,365 in Greater New York (116 to the good) Manhattan and Bronx have 5,159 (a gain of 66), Brooklyn 1,927 (43 increase), Queens 212 and Richmond 66.

This handy volume should be found useful by any wide awake

physician, with interests in either of these states—patients moving or traveling will want the address of a physician. The directory is one of institutions and societies as well as of individuals and officials; it presents the code of ethics and medical laws of New York State.

TRANSACTIONS OF THE EIGHTH QUINQUENNIAL HOMŒOPATHIC INTERNATIONAL CONGRESS. (In Two Volumes.) Held at London, England, July 17 to 22, 1911. Editor, E. PETRIE HOYLE, M. D. Publishers, The Congress Committee. 1911.

These two volumes, totalling about 850 pages, are replete with the most interesting reading for the general physician, the specialist, and the homœopathic layman as well.

The scientific and practical character of the component articles on every division of medicine and surgery make them useful study for the profession at large.

About twenty of the papers read were upon subjects included under the "Head Specialties"—Eye, Ear, Nose and Throat. The thorough manner in which most of these are prepared make them profitable study for all practicing in our special field.

And the reports of the progress which our school has made in the several countries of the globe is entertaining, educative and gratifying to all interested in our school.

To the American M. D.'s it is also pleasing to note that of the one hundred and twenty-five contributors of papers to this Congress, that forty-six came from this side of the Atlantic, and of these some traveled from the balmy shores of the Pacific, or near thereto, to contribute their quota to medical science as formulated by Hahnemann.

For sale by Headley Bros., Ashford, Kent, England.

The Journal of Ophthalmology, Otology and Laryngology

Vol. XVIII

Lancaster, Pa., and New York, December, 1912

No. 12

EDITORIAL.

WHAT CONSTITUTES A HOMŒOPATHIC OCULIST, LARYNGOLOGIST, ETC.

IS mere membership in a "homœopathic" society a sufficient criterion? The writer has heard a member of such a society openly declare that he knew no homœopathic materia medica.

Is not "the official definition of the homœopathic physician equally applicable to ophthalmologists, aurists, rhinologists, laryngologists, surgeons, obstetricians, gynecologists, and all the rest of the specialists who attempted the cure of patients? Surely wherever there may arise occasion for the internal (or even external) administration of a medicine the homœopathist "is one who adds to his knowledge of medicine a special knowledge of homœopathic therapeutics *and observes the law of similia.*"

Our practitioners in the head specialties naturally tend—unless on their guard against it—to rely upon the topical and surgical methods of the "dominant school" teachers, books and journals. This is proper enough provided they also apply the homœopathic remedy when it is suitable. Else what is the difference between them and those who do not pretend to be homœopaths? And why should they be supported by the homœopathic branch of the medical profession?

Notwithstanding their paucity in numbers we have good homœopathic teachers, practitioners, books, and one journal, in these lines; and homœopathy has been demonstrated to be an invaluable resource in the treatment of diseased conditions of the eye, ear, throat and nose.

Verification of symptoms is an essential part of homœopathy, and each of us can contribute to this with comparatively little effort. Such contributions, reports of homœopathic cures and the indications upon which we use our favorite remedies serve to stimulate the interest and courage of readers and therefore will strengthen homœopathy.

It should—but evidently is not—unnecessary to remind our readers of their debt to the founders and upbuilders of our school.

We are giving editorial prominence to a letter from Dr. Philip Rice, trusting that it carries enough sting to prove an awakener yet without arousing any personal animosities, for it is written without such intent.

Dr. Rice's point is well taken: we are judged by our protestations, whether of word or deed. Members of a homœopathic society are fairly supposed to practice homœopathy, although not necessarily exclusively, and to be able to give evidence of as well as reasons for the faith that is in them. Failing this the charge of trading upon the name should not be resented.

No wonder Dr. Rice feels the necessity for sharp words—only six papers in response to 235 letters; but he has apparently overlooked our *Reproving of Belladonna*, and A. B. Norton's "Ophthalmic Diseases and Therapeutics." Yes, we are better off than we were in homœopathic therapeutics of our specialties, but why has Ivin's *Nasal Therapeutics* been suffered to stay out of print with no successor? Norton encourages us to hope for, to call for, a similar book on the ear—Houghton's is not satisfactory (perhaps because of its arrangement)—and others upon the nose and throat.

HOMŒOPATHIC THERAPEUTICS AND THE AMERICAN HOMŒOPATHIC OPTHALMOLOGICAL, OTOLOGICAL AND LARYNGOLOGICAL SOCIETY.

Is not an organization which announces a conviction of certain principles and a definite purpose in its name required by all the rules of common honesty to stand by them as truly as is an individual to stand by such profession as he may have made? Is it not as unbecoming or even reprehensible in the one case as in the other, to profess one thing and practice another?

The name of the O., O. and L. Society implies certain therapeutic convictions, and the first article in its constitution declares with emphasis a specific purpose. The name clearly says that its members hold certain therapeutic convictions called homœopathic, and the article says that the special purpose of the organization shall be to study the diseases of the eye, ear, nose and throat *with particular reference to homœopathic therapeutics*.

Now, whether these convictions are well founded and the enthu-

siasm for the cause warranted we will not attempt to discuss; they may for that matter be wholly erroneous. But the fact remains that we have given our endorsement to them, and we are continuing to do so while we retain membership in such organizations as publicly proclaim these convictions and purposes to carry them forward.

This position we assumed when we joined and we should realize that no indifferent responsibility goes with it. And we should realize, too, that others are as well aware of the fact when we fall short in the discharge of our responsibility as we ourselves are, and that they judge our integrity and honesty of purpose very much by our conduct in this matter.

The questions now arise: are we measuring up to what we profess and what in consequence is expected of us, or are we shirking? Are we seriously believing what we profess to believe and applying in practice the principles our organization stands for, or are we playing at believing and deluding ourselves with the idea that no one is on to the fact? A cursory review of our accomplishments for the past twenty-five years may serve as an answer.

The O., O. and L. Society has been in existence about twenty-five years now and with a well advertised profession of faith and a specifically declared purpose. What about its achievements? Are we now doing anything as an organized force that offers even a faint hope of advancement? So far as can be seen, absolutely nothing. Some few individuals are in a quiet way trying to improve the materia medica and make it more practicable, but neither they nor their work is very popular in the true sense of the word. The truth, in short, is that we are just milking the homœopathic cow and nothing more. Less than one article in ten written for our annual conventions deals with the subjects of materia medica and therapeutics, and in these we do really nothing more than put into other words the things we have been saying for fifty years or more. Nine-tenths of our energy we expend on matters to which the old school devotes its whole time and energy, invariably leading us by several years in all new discoveries. Yet apparently we are proud when we find ourselves able "to think their thoughts after them." The absurdity of our conduct seems never to have appeared to us.

We go on year after year in the same way never seeming to realize that that which is only dragged along behind can by no possibility ever get ahead. By showing this dire poverty, in both the quantity

and quality of our homœopathic literature, are we convicting ourselves of indolence and even rank pretense so far as medical practice goes? A reference to the matter of "the totality of the symptoms" in a discussion with a fellow homœopath some time ago was ended abruptly and in disgust by him because such "worn out tommyrot" was introduced.

The net result of 235 letters sent to the members of our society between May 1st and October 1st, asking for articles on *materia medica* and therapeutics for this department in our official journal, was six papers, two coming from men in general practice. Does not all this show which way we are drifting? It surely does, and it is enough to make the gods weep and the delinquents to blush.

Yet withal I am firmly convinced that the great majority in our ranks have as deep rooted a faith in the superiority of the homœopathic method of treatment as had any of the pioneers in the school, and would be utterly at sea if they should suddenly be deprived of their homœopathic remedies in their work. Some, of course, we know to have become so expert in chasing the will-o'-the-wisp of the old school that they find neither interest in nor time for the homœopathic *materia medica*; but fortunately they are not in great numbers.

It does seem as if it were time we came to a realizing sense of our position and should make some efforts to extricate ourselves. To some the position is entirely agreeable, that we know; but in every walk in life there are those who find "any old thing" agreeable so long as they are comfortable, and who resent any effort to change the existing order. From them the cry of "calamity-howler" and "pessimist" comes easily; but surely sensible people will not be deterred by such as these. Surely no one who reflects upon the situation at all seriously can be satisfied with it, or optimistic over it. Yet it can be changed. On this point there can be no dispute; it is simply a question of whether we are willing to make the effort, and the right kind of effort to change it.

PHILIP RICE.

SYMPOSIUM PROPHYLAXIS.

CHAIRMAN, HERBERT D. SCHENCK, M. D.,

(Concluded.)

PROFESSIONAL METHODS OF PREVENTING EAR, NOSE AND THROAT DISEASES.

GEORGE A. DENMAN, M. D.,

Toledo, O.

SINCE the Titanic steamship disaster there has been a world-wide movement to prevent its recurrence. Skilled minds of every nation are uniting their efforts to discover the causes responsible for the appalling loss of life and to remove them, that a similar disaster may be prevented in the future.

So it is at all times, to prevent an evil one must destroy the reason of its existence.

To prevent a disease we must attack its etiology. A complete discussion of the field embraced by this subject is not intended, but if this contribution to the symposium will aid us in determining where therapeutics ends and surgery begins, what is justifiable and what is uncertain or dangerous in procedures intended to prevent ear, nose and throat diseases, it will have fulfilled its purpose.

The condition under which a child comes into the world and its early care, the state of its vital forces and its inherited tendency of course influence greatly its ability to resist or combat its battles with the diseases of infancy.

The condition in which it emerges from these battles is still of greater importance and fortunate indeed is the youngster that, having experienced the exanthemata of measles and scarlatina, does not at an early age need the services of a competent aurist and laryngologist.

Depending instead upon the family physician, sequelæ are not recognized or if so expected to "correct themselves."

Often tonsillar degeneration accompanying the disease destroys the normal function and leaves instead an adherent fistulous mass harboring vile secretions and admitting of their constant absorption.

No matter how fully the indicated remedy is chosen the child does not promptly recover and is gradually robbed of its vitality as the blood becomes more impoverished.

The tonsils may appear innocent to the physician but a laryngologist would have recognized at once the need of their removal and the child when rid of their offending influence would quickly regain its rosy cheeks and normal strength.

Of equal importance is the close observation and attention to the ear following any disease, but most especially the ones mentioned, and in like manner are they often neglected at the period when if seen by the aurist, slight attention would prevent the later involvement of more serious import.

It is true that a simple catarrhal otitis media will often rupture the tympanum, drain, and promptly become self limited, and with such an experience in mind the physician may advise the parent to expect a suppurative otitis media—a sequelæ of scarlet fever, to do the same.

The result is too familiar to us all and the case that one might have controlled so easily at that time becomes a chronic discharging nuisance or menace, an embarrassment to the patient and resisting all methods of treatment short of a radical mastoid operation, attended with its dangers and also with a degree of uncertainty.

The importance of early diagnosis of adenoids and their prompt removal is now recognized by most general practitioners, and in this they have contributed more to preventive measures recently than they perhaps realize.

This subject will no doubt be so thoroughly discussed elsewhere that we cannot more than mention the necessity of an even more keen observation of the growing child that if possible, the pharyngeal hypertrophy be recognized and removed before the Eustachian tubes are affected and sufficiently early to avoid the danger of arrested development of the nose.

LARYNGEAL DISEASE.

The existence of laryngeal disease in typhoid fever is seldom recognized and yet will be found in more than 16 per cent. of the victims manifesting its presence by ulceration of the posterior surface of the larynx and extending superficially to posterior portion of the vocal cords and the ventricular bands.

Applications of solutions of lactic acid or silver nitrate upon their first appearance easily controls a condition that neglected, predisposes

to a chronic laryngitis and presents a fertile soil for the invasion of other forms of laryngeal disease.

The significance of congenital septal deviations or traumatic nasal deformities must be emphasized as a great predisposing factor of diseases of the nose and its accessory sinuses.

Quite frequently upon examination of an adult's nose we will discover evidence of a fall or blow and will be able to obtain history of an accident that produced nasal hemorrhage, but what was considered by their physician of insufficient importance to require the services of a consultant.

Having considered briefly the importance of preventive measures in early life, the writer feels he can contribute to the interest of this paper by submitting for discussion certain ideas relative to the value of conservative procedures purposed to prevent disease of the accessory cavities.

The anterior ethmoidal sinus in common with the maxillary and frontal sinuses discharge their secretions and are ventilated via the hiatus semilunaris.

This being true, it is obvious that any anatomical or pathological conditions causing obstruction of the flow of the secretions at this point will interfere with the drainage and ventilation of one or all of these sinuses and as a result they will be predisposed to infection and inflammation and the resistance of the tissues decreased to a state below normal.

It is equally probable that if the obstruction to the ventilation and drainage is removed the predisposition to infection and inflammation will disappear and the resistance of the tissues be increased to the normal state.

Within the nose there are certain anatomical structures that have been termed the "vicious circle" and when one has an extensive experience in the treatment of the sinus disease he realizes that it is truly named, for within this area rather than in the sinuses themselves must we seek the predisposing causes.

They are usually:

1st. The nasal septum is frequently deviated towards the lateral wall of the nose in the region of the anterior half of the middle turbinal body, often crowding the middle turbinal against the outer wall of the nose thus obstructing the drainage and ventilation of the frontal, anterior, ethmoidal and maxillary sinuses.

2d. The middle turbinal is frequently enlarged by edema, hyperplasia or by presence of accessory ethmoid cells in its body and may in consequence block the hiatus semilunaris.

3d. The bulla ethmoidalis being located immediately above the hiatus semilunaris may become enlarged, overhang, and completely obstruct sinus drainage, and

4th. The lip of the uncinate process or median wall of the infundibulum may be the seat of accessory pneumatic cells which also may serve as an obstruction.

In recent years we have more fully appreciated the significance of sinus disease and effect on the general health, especially upon the mentality, and there has also been some literary controversy regarding the treatment.

There are eminent rhinologists who advocate endonasal operation and drainage of the frontal sinus as the rational method while others of equal authority condemn it as a bold and dangerous procedure relying upon the external operation only; but none present I'm sure will dispute that the operation upon the frontal sinus, now the only one of many radical operations which disfigure the patient and often leave irreparable ocular disturbances—would be found unnecessary if the procedures were directed toward the correction of the abnormalities predisposing to the inflammation.

This paper does not presume to discuss the treatment of sinusitis but the writer does insist that conservative surgical interference for the purpose of correcting the conditions that prevent perfect drainage and ventilation of the accessory cavities will not only prevent a threatened inflammation but effect a cure of the majority of inflammations already existing.

I wish to close this rather abbreviated effort with a plea for the conservation of the turbinal.

Proper attention to the pathological turbinal is indeed a worthy prophylaxis, while the wholesale slaughter of that secretive and absorbing surface is almost criminal.

Let us urge the value of resection and plastic technique and condemn the old method of complete forcep removal, to the general practitioner who not only does his own tonsil and adenoid surgery but also keeps an old Prince turbinal forcep ready for every case of obstructed nasal breathing. •

421 Ohio Building.

HOMŒOPATHIC REMEDIES TENDING TO THE PREVENTION OF EAR, NOSE AND THROAT DISEASES.

H. S. WEAVER, M. D.,

Philadelphia, Pa.

WHEN the chairman of this Symposium wrote me asking for a paper on the Prophylactic Homœopathic Remedies useful in ear, nose and throat diseases I was at a loss to know exactly what was desired.

Similia similibus curantur or the law of Homœopathy, as I understand it, is the law of drug selection for the cure of the sick and not the law of drug selection for the prevention of disease. How can we select a remedy and prescribe it if there are no symptoms? We must have some underlying pathological condition before the human body can produce abnormal functions or diseased phenomena. Therefore the selection or prescribing of a homœopathic remedy for the prevention of disease is, it would seem to me, outside of the limitations of Hahnemann's law, but within the realm of the physician's duty to his patients. We should be scientific as well as homœopathic physicians, using the surgical and mechanical skill at our command as well as our *materia medica* for the prevention and relief of disease.

I am a firm believer in the law of similars for the selection of drugs for the cure of the sick as promulgated by Hahnemann. I know that our *materia medica* is rich in drugs that can be used with marvelous curative results when properly prescribed, but physicians must realize that the law of *similia similibus curantur* necessarily has its limitations and that some cases need surgical or mechanical intervention before absolute cure or relief can be obtained.

The successful physician is the one who soon acquaints himself with these facts and learns how to be a good diagnostician, not only as to pathological diagnosis, but as to the differentiation between cases requiring surgical or mechanical skill in addition to the carefully selected homœopathic remedy. This is according to the teachings of Hahnemann and if he were living today, in the light of our recent discoveries of instruments of precision, he would demonstrate without the shadow of a doubt the correctness of our law of drug selection.

In our school today we have two classes of physicians:

First: Those who place too much confidence in the efficacy of the internal remedy for the cure of all ills regardless of the pathological changes present, which may be purely surgical or mechanical and entirely outside the realm of medicine.

Second: Those who see only the surgical or mechanical side of the patient's condition and never think of the remedial measures obtainable through dynamic drug action.

In the prophylactic treatment of the diseases of the ear, nose and throat I believe the physician can and will be in the future of great assistance to the community, but I do not feel that it will be from his drug selection or administration that he will obtain his best results. Children born of parents who have certain inherited dyscrasia, such as tuberculosis, syphilis, etc., should be carefully watched and remedies prescribed suitable to these cases, but unless the proper diet and hygienic surroundings are insisted upon his efforts will be in vain.

The nose, as a respiratory organ, performs one of the most vital functions of the human body; therefore should receive proper care and attention. How many of your patients realize this and if they do how many see that the respiratory function is properly performed? The pathological conditions interfering with respiration do not come on suddenly, but insidiously, and as a rule it is only when nasal respiration is impossible or performed with great difficulty that relief is sought. All cases of imperfect nasal respiration should be examined and where pathological conditions are found remedial measures instituted and persisted in until perfect function is restored. Otherwise the physiological function of the nose and adjacent organs will be interfered with.

The development of the nose and mouth should be carefully watched. Contracted or narrowed upper jaw with high arched palate and protruding incisor teeth will need the careful services of a skillful dentist or orthodontist. Otherwise deformities occur which later in life interfere with the physiological function.

Many of the sigmoid deflections of the nasal septum which interfere with nasal respiration have their origin in this way, and it would be just as scientific to prescribe *Hypericum* for a fracture of the nose without adjusting the displaced fragments and expect a perfect result as to prescribe the indicated remedy, however well indicated it may be, in the above deformities without the mechanical adjustment necessary, and expect perfect results.

The orthodontist will fill a very important place in the prophylactic treatment of ear, nose and throat diseases by properly adjusting and regulating the development of the teeth and maxillary bones, thereby preventing many of the deformities which necessarily interfere with normal functions of these organs. These are mechanical defects and must be corrected by mechanical devices. It is absolutely outside the realm of internal medicine. Defective teeth, unfilled or improperly filled cavities and pyorrhœic conditions unquestionably give rise to septic infections or absorption of oxic materials with resulting nasopharyngeal and gastro-intestinal symptoms, for which dental service is the most rational treatment.

The homœopathic remedy, I care not how carefully selected, according to the totality of the symptoms in these cases, when it is given alone is doomed to failure in so far as the ultimate cure of the patient is concerned. I am willing to admit that many of the subjective symptoms can be relieved, but the pathological, surgical or mechanical effects still remain and with the slightest exciting cause present a recurrence of all the acute symptoms soon takes place.

This paper was to dwell more particularly upon the remedial side of the prophylactic treatment. The administration of drugs for the prevention of disease is not Homœopathy. Hahnemann promulgated his law for the treatment of the sick, not for the prevention of disease. I know that page after page has been written about the cure of certain nose and throat conditions such as hypertrophied tonsils and postnasal adenoids by the internal remedy, but have you seen it accomplished? Hypertrophied tonsils during acute inflammations are markedly enlarged over their usual normal size and will decrease to that size again as soon as the acute inflammation subsides. These reductions in size are often spoken of as cures and attributed to the action of the internal remedy administered, when in fact it is simply a normal physiological resolution taking place and the same result would have been accomplished without treatment.

Understand I am not advising against the treatment of these conditions by internal medication, but ask for a rational limitation of its use. Nothing that I know will relieve the subjective symptoms arising from these pathological conditions quicker than the well selected internal remedy, but this does not constitute a cure.

Postnasal adenoids cause a train of symptoms with which you are all familiar, and experience has taught us that normal atrophy of

these growths begins to take place at puberty and later in life barely a trace of their former existence can be found. When this atrophy takes place normally are we justified in attributing the results to our remedies?

I have prescribed the internal remedies, to the best of my ability, according to the totality of the symptoms both in hospital and private practice, and relieved the acute symptoms, but this I do not claim as a cure of the condition. The adenoids still remained and these patients are subject to repeated acute exacerbations.

Many remedies are useful in the treatment of hypertrophied tonsils and enlarged postnasal adenoids, but the one that has been most curative in my hands is *Ferrum metallicum*, not given for its dynamic effect, but well-tempered, keen-edged and thoroughly sterilized.

1433 Spruce St.

SYMPOSIUM—PROPHYLAXIS—DISCUSSION.

G. D. ARNDT: I have little to add to the subject considered in the paper, but I would like to suggest the school as a field for professional activity in preserving the eyes of the pupils. In modern education the extreme demand made upon the eyes of children in the school is a thing to be considered and met, so that damage of a permanent nature may not be done to the eyes of the growing generation. It seems to me that the work done by the eyes in the schools is out of proportion to that done by the other senses. Comparatively little is done towards education through the ears. Physicians will have to take hold of the subject and co-operate with the educational authorities before much permanent gain can be accomplished. Children are required to do work at close range, making excessive use of the accommodation. Some method must be devised to train children without such over-use of the eyes. The sense of hearing and the sense of touch need to be used more so as to save the eyes from doing so much work at close range upon minute objects. I have tried to do something with it myself and have met every sort of resistance from the school people. The argument they used was that it had been always done that way and it had proved satisfactory; why should it be done in any other way? I would bespeak your interest and attention to methods of training the ear, the touch and the eye equally; it would be productive of great good to future generations if not to those of the present time.

DAVID W. WELLS: In regard to *ophthalmia neonatorum* you are aware perhaps that great attention is paid to this in Boston. At the recent meeting of the American Medical Association the chairman of the Bureau of Prevention of Blindness said that Boston led the United

States in carrying out the prophylaxis of ophthalmia neonatorum. Not only do we have there the regulations of the Board of Health, but there is in vogue a follow-up method; it is a good thing to have laws, but it is a better thing to see that they are enforced. A physician who comes across a case of sore eyes in an infant must report the same to the Board of Health immediately. Midwives have to report such cases within twenty-four hours. There is a penalty of fifty dollars for neglecting to do it. Whenever word is received by the Board of Health that a case exists an investigator is sent out to look the matter up and if the physician is found to have neglected his duty he is prosecuted.

It was found that directly following two public prosecutions the number of cases increased wonderfully and then decreased, showing that numbers of cases were not reported. If such laws were more general and as well carried out as in Boston there would be fewer cases of blindness.

DR. NORRIS: Dr. Fellows referred to tubercular conditions of the eye and it brought to mind a patient of Dr. Shepard's at the hospital. I wish that Dr. Shepard would tell us about it.

G. A. SHEPARD: It hardly seems to fit in here, although it was an interesting case in itself. I did speak of it last night at the smoker, but it would not be appropriate now.

H. D. SCHENCK: In New York State the Board of Health distribute ampules of a nitrate of silver solution of the proper strength for use by the general practitioner; also the consent of seven-eighths of the physicians of the State to use that method of prophylaxis by the local application of silver has been secured. I do not think that the results in Massachusetts compare with those attained in New York by the methods in use there. Extensive investigations secured the results; the practice in the rural districts was found to be very lax and the trouble was not all with the midwives by any means. They did not have as many cases as the physicians of the regular schools. That fact was shown both in New York and in Massachusetts. It is pure carelessness on the part of the physicians. Having had nine hundred and ninety-nine births without losing an eye, they never use any prophylaxis and trust to luck to never have any.

DR. NORRIS: Do I understand that the nitrate of silver solution is the official treatment in New York? Two or three years ago I was looking up the subject and made some inquiries at the Lying-In Hospital, and found that they were using a 10% solution of argyrol as a prophylactic. Why was a change made to silver nitrate?

H. D. SCHENCK: The nitrate of silver solution was adopted on the recommendation of a commission appointed by the American Medical Association to investigate the whole subject. That committee recommended the silver nitrate solution in preference to any other. A number of solutions were found effective and might be used with suc-

cess, but the silver nitrate solution was given the preference, as being simpler, more effective and non-proprietary. It is simply a recommendation made more effective by the free furnishing of ampules containing it for convenience. My personal opinion is neutral as to the merits of the two solutions. In both the hospitals with which I am connected they use the argyrol and never have a case.

PRESIDENT: If there is no more discussion I will call upon Dr. Fellows to close.

C. G. FELLOWS: The last remark of Dr. Schenck gives the whole thing away. It is the same argument used by those who have had the nine hundred cases somebody mentioned without any prophylaxis and never had a case. That argument holds just as good for those who never use prophylaxis as it does for any prophylactic whatever. You rarely or never have the disease and therefore you are protected by any old thing that you happen to use. The preponderance of evidence that I have gone over indicates that argentic nitrate is the most uniformly effective. I have had some personal experience with it in the Chicago hospitals.

DAVID W. WELLS: Argentic nitrate in one per cent. solution is what is used in Massachusetts.

E. B. HOOKER: This is a wide subject and I hardly know whether to confine myself to the three or four divisions taken up by Dr. Copeland or to discuss it in its larger aspect. I agree heartily with everything that Dr. Copeland has said. It is important to have the water in the swimming pools clean, and also to diminish noises in our cities in every way possible and to prevent injury by broken glass, but those are but a small part of the measures which might be taken to diminish the prevalence of disease. In the future stronger measures will be taken to prevent the spread of syphilitic and gonorrhœal diseases. We all know how many cases of eye inflammation can be traced to gonorrhœal infection. One of the prophylactic measures that will come in time will be its prevention by the prohibition of marriage of anyone who has either syphilis or gonorrhœa. I am in favor of the movement that has been lately inaugurated, that a man and woman desiring to be married must show, so far as it can be shown, certificates of health. That is going back to first principles and I favor it. I know the great difficulty of establishing a diagnosis of syphilis or gonorrhœa, but considered in view of the seriousness of the situation, that some effort should be made to determine the health status before marriage. The legislatures of the various States should make it compulsory upon midwives to use nitrate of silver in every case of childbirth. Physicians can be trusted to do this, but we have such a large foreign population of ignorant people who depend entirely upon midwives, who are themselves too often ignorant, that I believe that its use should be not merely suggestive; it should be obligatory upon midwives.

School inspection should be carried farther than it is now. An improvement would be to have it carried out by inspectors on a salary who are not allowed to engage in private practice and who give their entire time to their school work, and they should be paid adequate salaries.

I. R. METZGER: The Pennsylvania Limited was wrecked not far from my neighborhood. I think that about six lost their lives and about ninety were injured, and the majority would have escaped injury if it had not been for the cuts inflicted by the broken glass. Nearly everyone had cuts, some of them very serious.

DAVID W. WELLS: Will Dr. Copeland please state what the effect upon the eyes is of looking through these wire glass panes.

H. D. SCHENCK: There was some discussion among the health authorities in New York in regard to protection from syphilis and gonorrhœa. The State commissioner found so many difficulties and objections to carrying out any effective plan that he gave it up, but the State Department is carrying on a home to home campaign of education. Lectures are being given with stereopticon pictures, illustrating the dangers of venereal diseases.

R. S. COPELAND: I was hoping that members might make some practical suggestions as to some means to induce the common carriers to take hold of this matter of the wire glass. Owing to the extra weight and cost of the wire glass they are not going to do anything about it until there is a public demand for it. I was interviewed by a representative of a paper about an accident and called attention to the fact that there would not be so many accidents if the companies could be induced to use more wire glass, but the article carefully refrained from any mention of a proprietary article.

In answer to Dr. Wells' question, as the meshes are far apart and the amount of time spent by the average man in cars looking through windows is not great, I should not think there could be any bad effect upon the vision, not nearly as much as looking through a window wet with rain drops.

I believe it is our duty to inform the public about the comparative safety of the wire glass and so create a public demand for it. It would save accidents to have wire glass in elevator doors and shafts. To me that sort of glass offers no serious visual obstruction and I do not believe that it does to anybody else. The glass wind shields in automobiles are a menace to all persons sitting behind them. It is our duty to enter upon a campaign of education to show what a menace so much unprotected glass is in public and other conveyances.

H. D. SCHENCK: If you will formulate a resolution and present it it would be a good way to begin.

DAVID W. WELLS: I am much interested in the subject and one or two points occur to me to mention. One is about color vision; it is a matter of degree, many are able to distinguish between red and

green and yet have defective color sense. I think that the colored worsteds is a practical method. I have not met the difficulty in using it that Dr. Muncy speaks of. It is a matter of a very few minutes to determine the existence of a defective color sense. My experience covers 500 school children in Wellesley, 2,000 in Hyde Park, 5,000 in Quincy; all suburbs of Boston. We experienced no difficulty in carrying out color tests satisfactorily with the worsteds. Dr. Muncy emphasizes the importance of having those tests made by teachers rather than by the school physicians. It has been claimed by Dr. Myles Standish that it is very misleading to have tests of the eyesight made by even the school physicians. Reports made by them give to the parents a sense of security that is not justified, and which they would not feel if made by the teachers. They are not more capable of making these tests than the teachers. The test should be made by the teachers and the parents will then not rest in a false security by believing that the test is more complete than one made by lay individuals.

PRESIDENT: In looking over the charts I notice that while there is mention made of "crossed" eyes there is none made of muscular trouble. There is certainly a chance to educate the teachers so that they will know better what they are doing, not only from the visual standpoint, but also in connection with muscular troubles. With this chart they get merely the "cross-eyed" cases; the important thing is to get them before the eyes "cross." There could easily be some test devised that could be done by the teachers to show this tendency. The card test as I use it would go in nicely there, and could be used either by the pupils or teachers. It is easy to place some object twenty feet away, cover one eye, then remove the cover and notice the movement of the eye. If this little test showed defect the child should be sent to the oculist for examination.

E. W. BEEBE: Just a word in regard to the illumination of the chart; it should be regulated. I find that while the type of the charts are standardized the light thrown upon it is not, and one oculist will have a certain kind of illumination and another possibly quite different. I find quite a difference in this respect. A much greater degree of precision in our tests would be gained if there was some standard of illumination.

Just a word regarding the illumination of the charts used for the determination of visual defects.

We have standard sizes of type, which are universally used by examiners for this purpose, but as yet no means has been devised for providing a uniform lighting system for indoor work, so that the tests made by one examiner will correspond with those made by another.

This is very desirable in many instances, particularly in the examinations of railroad employees who must have normal vision in order

to hold their positions or to obtain promotion, and who are likely to come up before several different examiners in the course of a few months. It is apparent that in such cases confusion and possibly injustice may be done the applicant from a lack of a uniform system of chart lighting.

Tests in the open air, with sunlight shining directly on the charts being taken as a standard, it would not be difficult to arrange electric illumination for indoor examinations, so that they might be uniform, and I trust that someone interested in the subject may successfully work out such a method.

J. W. STITZEL: One difficulty about the school inspectors is that they are appointed by the politicians or by political people, and they do not do the work well. It may be from inattention and carelessness or it may be from incompetency. By means of a number of cases referred to me which I examined I am able to say that the examination is not adequate. One source of the trouble may be that the child is bashful and hence its trouble cannot be found out in a brief examination. I think that the teachers would make better examiners than the doctors. I do not wish to be understood as opposed to medical inspection, but I think that we should be careful whom we appoint. Cases have been referred to me for enlarged tonsils when you almost need a microscope to see the tonsils at all. Another case with 20/15ths vision was passed as being in perfect condition. Such blunders make the inspection ridiculous to the people. There will be a revolution in Pennsylvania in a few years if such mistakes are made continually. The inspectors are incompetents.

H. W. CHAPLIN: I endorse that position.

A. WORRALL PALMER: The speaker believes that the present examination of school children, which most appreciate is in the formative stage at present, is one of the most beneficial contributory departments of public education that is being carried on. We consider that the examiners accomplish as much as possible in the time allotted them in the school schedule and by the methods allowed. But there is one technical point which we surgeons having hospital clinics come in contact with that may not be thought of by the examiners, and that is the nomenclature used. Precisely speaking, I mean the examiner finds the child a mouth breather, and as such is caused in about seventy-five per cent. of the cases by adenoids such a diagnosis is given. But there is the other twenty-five per cent, in which there is some other cause, and it is in these that the parents are dissatisfied with the results of the thorough examination at a hospital if the surgeon does not carry out the idea of the school examiner by operating upon the patient.

Could not a nomenclature as "respiratory stoppage" or "mouth breather" be adopted? Then the family physician or public clinical surgeon, who has the opportunity to make a thorough examination,

would not be compelled to disagree in diagnosis with the school examiner, as such disagreement weakens the confidence of the public in either the school examiner or the surgeons and ultimately lessens their confidence in the medical profession in general. The loss of confidence in our profession, the speaker thinks, needs consideration in this era of higher education in hygiene and health by the fancifully illustrated,, attractively written, but ordinarily ridiculous, articles in the daily press.

PRESIDENT: Are the tests made in the room where all the children see what is being done?

WM. MUNCY: No; the child never sees the card until outside the general room and then only one at a time. They cannot be tested in groups.

H. D. SCHENCK: Medical inspection, which includes the broad basis of examination of school children, not only for disease, but for physical defects, has made enormous strides, especially in the cities and more progressive villages of the country in the last five or six years. Every member of this society has some one come to him almost every week who feels that he or she is greatly handicapped and that a great strain has been put upon their nervous system by not having some defect discovered by a school examination which ought to be given every child when it reaches the age of seven years.

The two main factors always in medical inspection are the expense and the limitation of paternalism. The expense of medical inspectors worthy of the name has made it impossible for many communities to take it up without increasing the tax burdens for education beyond the limit to which the taxpayer will go. And then comes that knotty problem of whether the State should assume the burden of the parent who is ignorant or wilfully uninterested in the welfare and progress of his off-spring in giving him a decent chance in the world. Whether a fine or imprisonment of such parents for neglect is not advisable as a jog to such blunted consciences I am not in a position to say, but I would like to see it tried in some obnoxious cases.

Whether Boards of Health or Boards of Education are the best agents to examine children for physical defects is still unsettled. In some communities the Board of Health has been so efficiently organized that it has been possible to take up this work and carry it along in co-operation with the Board of Education harmoniously and efficiently. In the majority of cases, however, the two departments do not work together, but shirk their responsibility and shift it on to the shoulders of the other instead of manfully trying to do their part. It would seem to me a simple proposition in most cases for the Board of Education to have inspectors who should be in the employ of this department and give their whole time to their work as the teachers and nurses do, and be the final and only authority for determining the diagnosis and disposition of physical defects or infectious diseases found in school children. It ought not be necessary, as the writer

claims, to duplicate the forms if the departments co-operate so that cases referred to the Board of Health might be quickly and efficiently cared for in their special laboratories and departments.

The great stumbling block in getting the examinations of the eyes and ears, as well as discovering the most glaring of the other physical defects, is the lack of instruction given the teachers. In New York State the State Department of Health has been urging for several years that the State Department of Education train the teachers graduating from its normal schools for this work, and give them instruction as to the necessity and urgency of it. We have not yet reached this point, but this year we are having the examination made of all the children outside the cities and large villages by the school superintendents who were appointed as supervisors in place of the old school commissioners last fall. These men and women have been given practical instructions and the plainest kind of directions for carrying on these examinations, and they are supposed to do the work or see that the teachers properly examine the children at least once a year to determine their vision and hearing, whether the child is a mouth breather, has defective teeth or any other physical defect. The examinations made by the teachers in the incorporated villages of New York State, to which these examinations have hitherto been confined, were much more careful and accurate than the examinations in the city of New York made by the inspectors of the Board of Health, where many of the children do not get an examination perhaps only every three or four years; sometimes never but once.

In my own practice I have not found it accurate to try to test children under ten years of age with the watch. They know that you want them to hear it, and they will deceive you regarding their ability to hear the tick, just as many adults are themselves deceived in trying to determine the limit at which they can hear the watch. Whispered tones have proven much more accurate and satisfactory with me.

The difference between the effectiveness of the work of a medical inspector in the schools and that of the medical inspector supplemented by a nurse is as twenty to ninety per cent. That is, the nurse will get the parents to care for ninety per cent. of the cases of physical defects, whereas the medical inspector without the home work of the nurse can get only about twenty.

I quite agree with the writer of the paper that the examination of school children is not revolutionary, but most certainly is evolutionary, and that the most progressive of the communities that are taking up the work and using it to best advantage, as well as most economically, are those that use all the machinery of the city or town for carrying out the work.

There must be co-operation of Boards of Health and Education, and especially of nurses trained for this work, who are taught to know the limitations of their work and must ever feel that they are nurses whose province is to get the co-operation of the parents and to train them

to better hygienic methods of living; who do not yield to the temptation of becoming, as so many of them do, practitioners of medicine. They have no business to make a diagnosis or suggest treatment. Their proper station stops far short of this work.

WM. MUNCY: My paper is a practical one. I do not think that we are at all visionary in Rhode Island. In this country there is not near as much paternalism exercised by the State as there is in European countries; therefore we cannot do things that are done there. We accomplish as much as is possible with five hundred dollars. Lack of funds is one of the greatest troubles. I used the Thomas color worsteds, but had only one set where we should have had fifty sets. They soon lost their color when handled by 100 to 200 dirty children. The drawing teachers in our district find the defective color sense pupils generally sooner than we do. Then again it was thought that the teachers were doing too much and there was objection to having the worsted tests.

DAVID W. WELLS: I said that the teachers should make the examinations, but did not mean that they were expected to do expert work.

WM. MUNCY: I think that it is true that the simple vision and hearing tests are better made by the teachers than by the doctors. I think I brought out in my paper that the term "mouth breathers" is a better one to use than "adenoids," enlarged tonsils, deflected septum or whatever the defect may be. Since we have used that term it has been satisfactory. I tried a number of teachers with the whispering test and found that they did not test the children satisfactorily; moreover it takes too much room. None of these tests are scientific or precise tests, but only approximate. At best the old system of teachers' unrecorded examination is defective. I have had two cases of trachoma of three years' duration before the children came to the office. They had never been sent down by the teacher for inspection. I discovered children who had been in the school for ten years with vision of 20/200ths without being reported for inspection. This shows that it is impossible to expect teachers to make good tests or to recognize all the cases that need attention unless a report is required of each pupil. It should be compulsory to test all children once a year and to furnish a certificate that it has been done. With instructed teachers and with blanks to fill out it is possible to do good work until we obtain something better.

My hearing test is a combination of both the receding watch test and the approach test, only the approach test is the one recorded, as it eliminates a distance I call the area of retained attentive hearing, which area is large enough in many deaf cases to be taken for normal if the receding test is used. This is especially true in cases of impacted cerumen.

I think Dr. Suffa's suggestions very practical with trained teachers, but without such impossible.

R. S. COPELAND: I have a matter to speak of now if agreeable. I

was asked to formulate a resolution for the consideration of this society in regard to the subject of my paper. I would like to offer the following:

WHEREAS: Many of the fatalities and injuries in accidents in public carriers arise from broken and shattered glass of windows, doors, etc., and,

WHEREAS: The recent invention of wire glass is capable, if used, of greatly diminishing such injuries and fatalities; therefore be it

RESOLVED, That the attention of the public and of public carriers and accident insurance companies is called to this menace to public safety and the means of its removal; and be it further

RESOLVED, That a committee of three members of this society be appointed to consider the matter and to formulate and execute plans to make the resolution more effective. Seconded. Carried.

PRESIDENT: I appoint Drs. R. S. Copeland, H. D. Schenck and D. W. Wells.

A. WORRALL PALMER: Some years ago I thought that I was becoming a pretty good prescriber under the tuition of the late Dr. Martin Deschere, and I tried to reduce enlarged tonsils, adenoids and other

A. WORRALL PALMER: Some years ago I attained being a more than average prescriber, thanks to the tutillage of the late Dr. Martin Deschere, and I tried to reduce enlarged tonsils, adenoids, etc., generally considered amenable to surgical measures only. It worked in a few cases only. I had a good helper in Dr. Dwyer, who studied under Dr. Baehr. He came to my clinic for the express purpose of prescribing the homeopathic remedy for cases of hypertrophied tonsils. He prescribed for a good many. I must say that I was disappointed with the results; in some of the young cases there was a reduction of the hypertrophies. I have seen adenoids disappear while I was giving homeopathic remedies, but the usual result is failure. At the same time I do not feel disposed to leave out our remedies altogether in such cases because they do much for the patient's good if they do not actually cure. In cases over five or seven years of age internal medication is seldom curative, but in young patients where the lymphoid tissue is of soft variety I have observed many good results. Often where there is no immediate need for operation I give remedies a trial.

H. P. BELLWS: In regard to this subject I want to make one point, which is the importance of treating with internal medicines the troubles of patients who are subject to chronic catarrh of the middle ear. Such cases are made markedly worse by every acute cold. While the treatment of such attacks is not exactly prophylaxis, yet it is a preventive measure so far as preventing a bad effect upon the chronic trouble. I tell my patients as soon as they get an acute cold to go to their family doctor and be treated for it. If I find some particular type of cold to which they are subject and cannot readily consult the family physician I furnish them with medicine, which they

use. Especially do I do this if they are going away on a journey. Some people I find are subject to attacks accompanied by a thick secretion; others to colds that result in a thin watery secretion. I supply them with two three-dram vials marked "cold thick" and "cold thin." The thin generally contains *Ars. iodide*, the thick *Mercurius*. I think that such a procedure prevents the cold from aggravating the already chronic condition. *Dulcamara* is an excellent and a frequently indicated remedy in ear troubles. It protects the ear from invasion through the Eustachian tube. I have great confidence in it.

G. A. SHEPARD: I have many times seen children with local troubles greatly improved and delivered from the hands of the specialist by a few doses of *Calcarea phos.* No doubt you have all seen constitutional troubles removed by remedies that would in all probability have ended in serious disease. I have seen *Natrum mur.* cure the eye-ache of muscular asthenopia because of its effect upon the nervous system. I am perfectly convinced of having seen edematous lenses with haziness become normal under the use of *Causticum* and cataract thus retarded or prevented. Proof of this rests in measurement of the refraction of the eye, not one or two or three times, but during many years, and having seen it clear up with remedies. I do not mean to say that every case can be so prevented, but only that there are many such cases.

WM. MUNCY: I have learned to use *Causticum* in similar cases to those spoken of by Dr. Shepard and obtained results. However as I employed so many other agencies at the same time I can never be sure which did the most good in these cases. I know that the patients were much improved, but am at a loss whether to attribute the improvement to the high frequency current, to *Causticum* or to *Dionin*. In my incipient cases of cataract I feel sure that half of them at least have not made any advance in the last four years. Two years ago a man came to my office who had had three prescriptions for reading glasses in the previous month. He had just reached the stage where he could not see well enough to do his work at the office. He was anxious to do anything that I could suggest to be able to keep his position. I gave him high frequency currents, *Causticum* and a half per cent. solution of *Dionin*. He has also soothing drops morning and afternoons, a weak solution of solution "B" and *Adrenalin*. If the treatment causes too much reaction, say, redness and itching, I cut it down for a time and then go back to the original strength. I have cases that continue using the same solution for two years of the same strength. The above case had a slight improvement in vision; since then has remained stationary.

H. S. WEAVER: I do not want to convey the idea that I do not place any confidence in homeopathic remedies in special work. There are many cases in our specialties, especially younger ones, which are materially helped by internal medication. Even in adenoids I have seen results in cases treated when five years old or earlier, but later

I have never seen any results. I would not care to practice medicine in my specialty if I were to be deprived of the use of homœopathic materia medica. In my own place I am considered something of a crank in that line. For a long time now I have used *Agraphus* as a routine remedy for children coming to me with adenoids; I use it for the congestion and catarrhal condition of the nasal passages. I use it also in the ear symptoms arising from adenoids until such time as I think operation is indicated. My two pets for the more acute coryzas are *Aconite* and *Gelsemium*. I average most excellent results from these two remedies. As an instance of removal of foreign body from the eye, one of my patients while coming home from Atlantic City got a cinder in the eye which was very painful. An old lady on the train offered to remove it immediately. She approached him closely as if to look in the eye, and then suddenly thrust her tongue between the lid and the eyeball and rolled it all around. In regard to cataracts I have been in the habit of using two remedies, *Causticum* and *Calcarea fluorica*. I have a case which has been taking them for five years and has held his position in the railroad office where he has a high position. Five years ago his vision began to fail rapidly; the condition changed from marked hyperopia to marked myopia. At the start I could not find any opacity in the lense, but later I made them out.

I put him on *Calcarea fluorica* internally and gave him a boracic acid lotion locally; no other treatment. His vision increased from 20/100ths to 20/30ths, without any electricity or dionin. During the five years he has had also a few doses of *Causticum* in the 30th potency. Then he has gone back to the *Calcarea fluor.* 3x. I am satisfied that the *Calcarea* was the agent that kept him from blindness. He was rapidly going on to cataract and blindness.

C. L. RUMSEY: Are there opacities in the lense now?

H. S. WEAVER: You can get more decided reflexes than you could six months ago, showing that the opacities are clearing up, although they are not all gone yet.

H. D. SCHENCK: Did you make any radical changes in his habits?

H. S. WEAVER: Not especially.

PRESIDENT: Are there any vitreous opacities?

H. S. WEAVER: No vitreous opacities.

H. A. FOSTER: The important thing in the etiology of nasal catarrh is the quality and purity of the air. It is certain that judgment must be used in all nasal operations. The opening of the mastoids upon the slightest provocation is very unwise; undoubtedly the necessity for this operation has been exaggerated. Local treatment and internal remedies will do much to avert the necessity for an operation. The indicated remedies will do more towards prophylaxis than an ill-advised operation. It is a mistaken prophylactic effort to copiously irrigate the nasal passages as a matter of habit or routine. People easily form this habit with normal salt solution or borax solution or

with some patent medicine; such a habit will keep up a constant catarrhal discharge and often the only thing needed to cure a case is to stop the daily douch. The orthodontist does a great deal of good and helps us in our work. They are not called on often enough because we see so many defects in adult life that could easily have been prevented by a timely visit to the orthodontist. The submucous resection is too much advocated as a panacea for all nasal obstructions; here again judgment comes in. I am not willing to do it for patients who are under fifteen years old.

In looking over tubercular cases at the Metropolitan Hospital I found that practically every one of them had obstructed nares, generally due to deflected septum. The condition was very pronounced in thirty-two or three per cent. The deflected septum is an important feature in the etiology of coryzas; the cold usually starts on the side that is narrowed by the deflected septum, and while remedies can relieve and shorten the attacks it does nothing towards preventing their recurrence. After the septum is resected and corrected the cold-catching habit is greatly diminished and the remedies have a more permanent effect.

When the middle turbinate is affected infection may be carried back or up to the meninges of the brain; hence if the middle turbinate is in bad condition it is wise to remove it, and thus to improve drainage and lessen the risk of meningeal extension.

WM. MUNCY: The theory is being advanced now that the common catarrhs and coryzas are not due to the lack of pure air supply so much as to the changing humidity of the air. Troubles come from the great variation in the humidity; in a school room it has been found to vary from 30 to 80 degrees. The constant change in the humidity of the school rooms, from opening windows, steam heat and so on, is the reason that humidifiers are of advantage. They tend to keep the humidity at a certain degree and is the great preventive of colds. This constant changing of humidity has much to do with enlarged tonsils in the long run.

G. G. TOWSLEY: Only a few years ago there was not so much heard about this subject; its importance has gradually compelled the profession to pay strict attention to it. At the present time this method is carried out in all hospitals, and every doctor tries to approach the ideal cleanliness in his instruments and the preparations for any operation. As cleanliness in surgery is more strictly carried out I feel that our results will become better and better.

R. S. COPELAND: I move that any other papers on hand be read by title. Seconded. Carried.

R. S. COPELAND: I move that the society express its appreciation of the splendid services rendered by the president and other officers during the year and also during the present session. Seconded. Carried.

R. S. COPELAND: I move that the attention of the Executive Com-

mittee be called to the advisability of having our meeting immediately before the Institute meeting, or to have it condensed so as to occur during the early days of the Institute meeting, to the end that our session can be completed in three days' time. Seconded. Carried.

Adjourned subject to the call of the President.

ANONYMOUS: The examination of school children becomes a subject of utmost importance to the community, as it is an exponent of preventive medicine, which is the ideal medicine of today. As Dr. Muncy happily expresses it, "the question of school examination is not revolutionary, but evolutionary." Our large foreign population that now attends our public schools demands this school examination for their own advancement and for posterity.

I would commend Oliver's reading card, suggested by Dr. Muncy, for testing young children's eyes. While I am not a medical examiner of the public schools I have always found it necessary to use the astigmatic chart with children in my office; if they are unable to convey how they see the lines by the astigmatic chart I rely on retinoscopy;—astigmatism is most important to correct. I do not regard it wise to test the color sense by substituting the red and green line drawn between the lines on the reading chart. Children are apt to advise other children of these lines. The proper method to detect the color sense is by matching worsteds rather than by telling the color.

I would also make a criticism of the hearing test. There is no doubt that the watch method is the only present reliable method for testing hearing. It is always my method to hold the watch without the hearing distance and gradually approach the ear. I do not find the test reliable when I use the method of receding from the ear until the tick is lost.

While teachers cannot be accurate I believe with Dr. Muncy that they can be trained to render efficient service in the examination of defects in school children. For instance, they can with little experience observe mouth breathers, which is all that is necessary to report to the medical examiner. It is for him to determine if there are obstructions in the throat, as adenoids, or obstructions in the nose or a highly arched palate, which sometimes induces mouth breathing.

I commend Dr. Muncy's ideas on a district nursing association, where the nurse can give personal advice to parents for the removal of defects in their children, which cannot be conveyed to them by means of a card. If parents do not respond to the card the child has further advantage in the nurse calling to give necessary explanations for the needed service to the child. The nurse can also inspect the home and frequently teach parents hygienic living. For this reason I believe all teachers should have a course in applied school hygiene as well as a teacher's certificate.

I thank Dr. Muncy for his excellent paper and regard the subject of medical examination of school children of vital importance.

HAY FEVER.*

BY DAVID A. STRICKLER, M. D.,

Denver, Colo.

THIS disease, which seems to be becoming more and more prevalent, remains without definitely satisfactory treatment in spite of the investigations and claims of Dunbar.

The disease in typical cases is easily recognized and diagnosed, and many of the cases applying for treatment have been duly diagnosed and the diagnosis verified by repeated years of experience on the part of the sufferer.

The somewhat classical recognized causes of hay fever are, first, the constitutional—neurosis, temperament; second, local causes within the nose, and, third, exciting causes—emanations from plants and animals.

Of the constitutional causes little is definitely known. Why one person should be susceptible to the action of minute quantities of pollen albumen applied to the mucous membrane, and another not to infinitely large amounts of the same, is not known. It might be viewed as an idiosyncrasy, but it must then be an acquired idiosyncrasy which remains permanent. Dunbar claims that in persons subject to hay fever one drop of a 1 to 200,000 solution of pollen albumen—one-half drop of the 5x potency—placed on the mucous membranes is sufficient to set up a characteristic attack of sneezing, watery eyes, etc.; while in a person without this susceptibility a one per cent. or even more concentrated solution is without effect. How and why this susceptibility or idiosyncrasy is acquired has not been explained. Certain lowered conditions of metabolism and depressed states of the nervous system, such as occur in uric acid diathesis, and from excessive effort in extreme heat, are doubtless contributing causes in certain definite cases, but many times no cause can be assigned.

Under the head of local causes it is pretty generally recognized that few persons suffering from hay fever are free from diseased nasal mucous membranes extending from slight localized redness to general involvement of the membranes. The sinuses are coming more and

*Presented at the Colorado Homœopathic Society, Sept. 24, 1912.

more to the front as etiologic factors. This is especially true of the ethmoidal. The presence of polypoid growths is strongly suggestive of ethmoidal sinus involvement, the treatment of which has permanently cured a number of reported cases. Deflected septa, enlarged middle turbinates, hypertrophies localized and otherwise, causing pressure on the sneezing area, require surgical treatment between the seasons. Sensitive areas have been destroyed, but the results are not as definite as had been hoped for.

Exciting causes are now believed to be emanations from plants and in some instances from animals; whether in the latter instance the animal may carry in its hair or fur, as the case may be, the pollen or some specific irritant of its own, is a mooted question. Among the plants the golden rod—*solidago virganora*—and the rag weed—*ambrosia artemisia-folia*—are the principal ones in America, though the sweet pea, the cosmos, the rose, and doubtless other plants and grasses are responsible in individual cases.

To recapitulate, the causes of hay fever resolve themselves into three groups: First, constitutional or neurotic habit; second, local morbid lesions of the nose and accessory sinuses; third, the pollen of certain plants and perhaps emanations of certain animals.

The treatment should take into consideration these etiological factors. Under the first head the general condition of the patient must be considered and treated according to his needs,—medicine, hygiene and dietetics each given its due place. The homœopath will here, as elsewhere, find his remedy in the totality of symptoms. It has been my experience that remedies given on account of the eye and nasal conditions alone are not of much benefit. Dietetics is of definite use in disorders of metabolism, as when uric acid is a known factor. Hygiene has to do with proper amount of exercise in the open air and in keeping the skin in the best condition to perform its physical functions. Under the local lesions—inflammations of the mucous membrane, morbid growths, diseases of the sinuses, deflected septa or hypertrophy of the turbinal bodies, especially the middle hyperæsthetic areas, should be treated according to the indications in the interim between the seasons of attack. This is essential, because treatment during the attack is apt to be attended by excessive reaction and at best is very unsatisfactory. The rule which I have found to be the most satisfactory is to relieve as far as possible all interference with proper nasal drainage and all inflammatory foci, either during

the fall, winter or spring, and then have the patient wash out the nose systematically at least once a day, preferably twice, with some mild alkaline wash for thirty days prior to the usual onset of the attack.

As an inexpensive wash and one which has proven quite satisfactory in my experience, I direct the patient to mix chloride of sodium, bicarbonate of soda and baborate of soda (salt, baking soda and borax) in proportion of one part of the first and two each of the other two. These are mixed thoroughly and kept dry. One-third of a teaspoonful of this combined salt is put into two ounces of warm water, preferably in a nose cup, drawn through the nose into the throat, thus washing the nose and upper pharynx. The third etiological factor is met best by removing the patient from the location producing the pollen which acts as the irritant in his particular case. This is practical only for those who are financially able to leave their homes and live where experience may show them to be free of the disease. Dr. Porteous, of Minneapolis, reports very favorable results from the reduction of temperature in the home of the patient. A discovery made by a man in the cold storage business, who found that by living in rooms with refrigerative apparatus in which the temperature was lowered, that he was free from the attack. That when he returned to his home suffered as usual. He then conceived the idea of fitting up living rooms where he could lower the atmospheric temperature in which he was free from hay fever even in the presence of a room filled with pollen-bearing plants. He concludes from this and several other experiments which were made with like results that atmospheric temperature is a necessary complement in the production and maintenance of hay fever. As a preventive Dunbar insists that his antitoxine in very minute doses dropped into the conjunctival sac will at least greatly mitigate, and in many cases prevent the attack. That it is less effective after the attacks have once begun. He, in a recent article, is very emphatic in his claims with relation to the antitoxine, but insists that its failure in the hands of others is largely due to its being used in excessive quantities. Just why it is I do not know, but the profession in general fail to accredit to the antitoxine anything like the measure of success which he claims for it. In the absence of any specific form of treatment for this disease, and of any definite results from any other forms of treatment, it is perhaps wise to begin the treatment of all cases of hay fever with a trial of pollantin. If possible first ascertain the form of pollen to which the indi-

vidual case is most susceptible, and in the use of it to follow closely the direction given by Dunbar, whose experience has been very extensive in its use, and whose results have been duplicated by some very eminent men. Among the other forms of local treatment may be mentioned suprarenalin used in one to three or four thousand of normal salt solution. Boracic acid, cinnamon water and camphor water are sometimes used to prevent its decomposition. Insufflation of powdered sulphate of quinine has been used effectively in some cases. The itching at the inner canthi of the eye may be relieved by the use of boracic acid and camphor water. I have found very satisfactory for this purpose cocaine mur., one grain; suprarenalin, one to a thousand, one dram; saturated boracic solution, ad. one oz. The use of 500 candle power incandescent lamp applied for ten to twenty-five minutes over the face with the eyes closed, at a distance from 12 to 18 inches, by increasing the arterial and venous currents, gives very marked relief in some cases. It is claimed that this relief comes from one large incandescent lamp, but is not obtained by a cluster of smaller lamps.

612 Empire Bldg.

Epileptic Seizures Stopping After Refraction Correction. The case was that of a man who had been subject to attacks of grand mal about thrice weekly, and who had been free from attacks so far for six weeks since receiving his refractive correction, with the exception of a slight seizure on the night of the day when he first wore glasses. Twenty-two years previously he had been unconscious for several days after being struck with lightning. There had been attacks of vertigo for some time, after which no trouble was experienced till four years ago, when the vertigo reappeared, occurring about once a month for a year. Later he fell on the street with the attack of vertigo, and still later symptoms of petit mal appeared, to be followed by the liability to complete epileptic fits. The eye grounds were normal, and the correction was + 1.25 D. Sph. 0.75 D. Cyl. with the rules in each eye. The patient's mentality appeared to be normal.—*Dr. E. R. Neeper, Annals of Ophthalmology.*

SOCIETIES.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

(Continued from page 423.)

"Some Anatomical and Clinical Relations of the Sphenoidal Sinus to the Cavernous Sinus and the Third, Fourth, Fifth, Sixth and Vidian Nerves." By Greenfield Sluder, M. D. First the author reviewed the exact anatomical relations of the parts under consideration in the normal skull and some of the less rare anomalies. Then described in detail his very interesting and unique observations upon the pains and reflex symptoms caused by irritating the sphenoid and postethmoidal region, as well as reported cases of headaches, neuralgia, etc., in localities in skull quite distant from the sphenoid which were relieved and cured by medication of the sphenoid. Disease of the sphenoid may cause symptoms attributable to any or all of the other sinuses; therefore, is it so difficult a matter to diagnose disease of the posterior groups? In two cases he had been able to anesthetize the Cæsarian ganglion by cocanizing the lateral walls of the sphenoidal sinus. He said he wished this paper to be accepted and considered, preliminary report.

The subject was such an advanced idea it did not lend itself to discussion; but several members complimented the author on his findings, and judging from other peculiar similar experiences already accepted, they thought that probably some very practical possibilities might be developed along these lines in the future.

"Morphological Changes in the Nose and Face, Due to the Development of the Brain." By John M. Ingersoll, M. D. A large number of lantern projections were displayed, demonstrating the progressive development of the brain and nasal cavities commencing with the fish, gradually rising through the frog, turtle, bird, dog, monkey, ape to the acme in the human skull. In the lowest animal the component parts of the brain are in a straight and horizontal position. 1st, the olfactory bulb; 2d, the cerebrum; 3d, cerebellum; 4th medulla and cord—there are no convolutions—and it is especially noted that the nasal cavity is entirely in front of the brain. As the animal rises in the scale they gradually lose their straight position with the cord, assuming a rectangular position in man. And in like manner the nasal fossæ progressively drop down under the brain.

In animals which need the sense of olfaction particularly keen, such as dogs, etc., a plate of bone and cartilage seems providentially placed between the respiratory and olfactory portions of their nares by means of which they can voluntarily divert the incoming air into either the one or other channels of their nose.

"When Should Singers Having Vocal Disability be Allowed to Resume Work." By Clarence C. Rice, M. D. The author said that there is a great difference as to the time in which singers should rest after recovery from a disease of their vocal organs. There seems to be some personal equation in the matter,—one would be able to return to vocal exercising almost immediately thereafter, while another would need considerable rest unless some bad effect would supervene. The doctor mentioned several cases observed by him in which well trained vocalists had been able to perform their part with credit, although the throat was extensively diseased; two such cases he said had greatly enlarged tonsils and thickened pharyngeal mucosa from acute pharyngitis and tonsillitis.

"The Question of Postoperative Nasal Packing in the Light of Additional Experience with the Author's Rubber Tampon." By William E. Casselberry, M. D. Dr. Casselberry described and demonstrated again very thoroughly his original method of packing which consists of a rubber pouch very similar to a finger cot with the distal end dilated or rather with the constricted neck near the distal end. A piece of gauze bandage one-half inch in width, three feet and a half in length is cut, two or three inches of the end of this are tucked into a wad and tied with suture silk, the ends of which are left about a foot long. This wadded end of the bandage is now passed through the opening of the rubber cot into the bulbous end (the extra bandage and silk protruding from opening). Now the rubber plug containing the end of the bandage is placed through the bleeding nostril into the nasopharynx by means of a "gauze packer," a portion of gauze packed into the bulbous end,—now the end is little larger than the posterior choana,—now with suture silk the ends of which are left about a foot long. This nares, now finish by packing the bandage into the remainder of cot—being careful that this packing is only moderately tight.

The Hotel Chelsea management, we wish to say, proved themselves a most efficient host, by the extraordinarily quiet and pleasant meeting room allotted the society, the gastronomic feast served for the annual banquet, etc.

CORRESPONDENCE.

Cincinnati, O., November 22, 1912.

Dr. John L. Moffat, Editor,
Ithaca, New York.

Dear Dr. Moffat:

Thank you very much for your much appreciated letter of November 11 and the copy of the JOURNAL OF OPHTHALMOLOGY, I appreciate your generous comment more than I can tell you.

Your suggestion that glaucomatous eyes be examined for acid is a good one, but unfortunately yields only negative results. It is a little easier to make such acidity tests on other tissues that are œdematous.

The reason why it is so difficult to demonstrate the increased acid content of an œdematous tissue is because the acid unites with the proteins of the tissues to form the new acid—protein combination which has the greater power of swelling, but the reaction of this acid-protein compound is not materially different from that of the normal protein. In other words, it is the combined acidity, which gives the increased hydration.

With kindest personal regards,

Very Sincerely yours,

MARTIN H. FISCHER.

Dear Dr. Moffat:

New York, October 22, 1912.

In reply to your suggestion that the curriculum include operating by candidates for our degree—if you mean on the living subject, this is not possible except by the act of the surgeon to whom the patient belongs. Every patient entering the hospital is placed in some clinic, whose surgeons becomes legally responsible for the case and is liable, under the law, if anything goes wrong. Under such conditions you can see that the college has no power to order a surgeon to allow students to operate his cases.

If you mean operations upon the cadaver, I will say that we already have such a course in the nose and throat, one in the ear and two in the eye—one on the muscles and lids and the other on the eyeball.

Further, the surgeons *do* allow the students to make some operations toward the end of the course; but we could not require this of them.

Sincerely,

CHAS. DEADY.

HOMŒOPATHIC MATERIA MEDICA AND THERAPEUTICS.

DEPARTMENT EDITOR, PHILIP RICE, M. D.,

San Francisco, Cal.

Materia Medica Notes.

Digitalis. A careful study of the pathogenesis of this drug as expressed in both the primary and secondary effects inclines one to the opinion that it ought to be a useful remedy in glaucoma. Its effect upon the heart is such that at the same time that it inhibits the heart's action it stimulates the motor ganglia and increases the force of the contraction. In addition to this it contracts the arterioles throughout the body which still further increases the circulatory tension. Here, it seems to me, we are furnished a reasonable basis upon which to account for the increased tension in the eye, at least in those cases where a definite local cause is not found. The pathognomonic symptoms of the disease and the characteristic symptoms of the drug we find to be strikingly similar. For example:—Dilated and sluggish pupil; prismatic colors around a light; obscuration of vision, as if looking through a mist or smoke; horrible pains in the eye, as if the eye were too small; eye exquisitely sensitive to touch; pains pressing and radiating in character; sclera injected. Later in the disease we find the vision entirely destroyed.

CHARACTERISTIC SYMPTOMS.

Argentum Nitricum: Puckering of conjunctiva.

Arsenicum: Granular appearance of conjunctiva.

Carbolic Acid: Anæsthesia of conjunctiva.

Ipecac: Depressions or pits in conjunctiva.

Kali Bichromicum: Brown spots in conjunctiva. Conjunctiva traversed by large vessels, with small spots here and there like ecchymosis. Brown spots in cornea.

Kali Muriaticum: Vesicles on conjunctiva.

Mercurius: Pustules on conjunctiva.

Nux Moschata: Nodule in conjunctiva over each external rectus.

Staphisagria: Polypi on conjunctiva. Steatoma on palpebral conjunctiva.

Syphilinum: Dark red spots deep in conjunctiva, as if imbedded in the sclera. Syphilitic history.

Thuja: Condylomata on palpebral conjunctiva following chalazia and hordeola.

Phosphoric Acid: Yellow spots in conjunctiva.

CURRENT LITERATURE.

DEPARTMENT EDITORS.

WM. McLEAN, M. D.,
New York.

FRANK O. NAGLE, M. D.,
Philadelphia.

THE JOURNAL OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY.

Oct. 1912.

*1. The Giant Magnet in the Extraction of Foreign Bodies from the Eye. Willis O. Nance, M. D., Chicago.

*2. Ossicectomy With Report of Three Cases. Francis Dobija, M. D., Chicago.

Ossicectomy. Ossicectomy effects a cure in more than 50 per cent. of cases.

Dr. Newmann's method of local anæsthesia in Politzer's Clinic:

A 1 per cent. solution of cocain, to which two or three drops of Tonogen or Adrenalin are added for every cubic centimeter, is injected by means either of an ordinary hypodermic syringe with a needle of 6 or 7 cm. in length, or with Dr. Neumann's metal syringe devised for this purpose. In order to obtain complete anæsthesia of the drum membrane, the tympanic cavity and attic, it is necessary to introduce the needle into the upper posterior cartilaginous part of the external meatus about 1 cm. external to the bony part and to push the needle under the periosteum so that the solution will raise the soft parts of the upper and posterior wall of the canal from the bone to the attic. If after the first injection the skin does not bulge sufficiently, then a second injection must be made; this is occasionally the case when there are considerable defects in the drum membrane, as a part of the injected solution will flow out from the middle ear. Although in most cases the injection is not very painful, it is better to have the patient's head held firmly. This is not usually necessary during the extraction of the ossicles, which can be begun about 15 minutes after the injection.

It is possible to extract the hammer in those cases where the manubrium is visible, and also in those where the manubrium has been destroyed by caries or is imbedded in granulations.

The extraction of the anvil is much more difficult. It is more often

carious than the capitulum mallei, hence the result after extraction of the hammer alone would be of little value; to attain the best results the anvil must also be removed. A large number of instruments have been devised to extract the anvil, but frequently they are disappointing. Author uses four curettes, two adapted for each side, tried out at the Vienna clinic; the smaller is used in a narrow and the larger in a wide attic.

The extraction of the anvil is performed by bringing the little curette into the space occupied by the hammer, pushing it well up into the attic against the lateral wall and turning it backwards through about 90 degrees, whereby the anvil is held from above and pushed downward into view, when it can be removed with a pincette. If conditions make the removal of the anvil difficult or impossible, the outer wall of the attic may be cut away; the local anæsthesia lasts sufficiently long to do this. Hereupon the anvil can always be removed. Various authors recommend cutting through the stapedio-incudal joint before the extraction of the anvil is undertaken. The Vienna clinic takes exception to this and I agree with them for the reason that the stapedio-incudal joint is already damaged by the suppurative process and after the removal of the anvil, dizziness, vomiting or local subjective sounds have never been observed; if present these would indicate a dislocation of the stapes.

After successful extraction of the hammer and anvil, the granulations in the attic are cleaned out by means of a curette bent at an angle, the outer attic wall may be removed at the same time, if necessary, and the attic is given an antiseptic irrigation by the use of Hartmann's canula. Finally, the sympathetic cavity and the external meatus are lightly packed with dry gauze held in place by a bandage.

THE OPHTHALMIC RECORD. Oct. 1912.

*1. Burns of the Eyeball from the Contents of So-Called "Water-Core" Golf Balls. By Casey A. Wood.

2. Cursory Notes of an Ophthalmic Pilgrimage. By Temple Smith.

3. Report of a Case of Melanotic Sarcoma of the Ciliary Body. By H. T. Aynesworth.

*1. Dr. Wood relates his experiences in the treatment of burns of the eyes produced by the action of acids contained in the so-called "water-core" golf balls. The fluid center of the golf ball is used to obtain greater carry and resiliency.

The injury is obtained by the acid being forced under pressure from the golf ball and in the cases reported the patients were curious as to the contents of the golf ball and cut into the ball. The treatment prescribed was the same as for other acid burns.

*3. Sarcomata of the ciliary body only 1/10 of the sarcomata of the uveal tract. Round celled and very vascular types are most malignant. Local recurrence after thorough removal are observed in 2½ per cent. of the cases, while metastases to distant organs occur in 40 to 75 per cent. of cases.

The only treatment is earliest possible removal and in cases of peribulbar involvement, complete exenteration of the orbit is indicated.

The history of a case of melanotic sarcoma of the ciliary body is given. Enucleation of the eye was done and the microscopical examination confirmed the diagnosis, the report being, mixed round and spindle celled sarcoma, richly pigmented and very vascular.

OPHTHALMIC REVIEW. Nov. 1912.

1. Colobomata of the Eye (Cont'd). By R. Beatson Hird.

ANNALS OF OPHTHALMOLOGY. Oct. 1912.

1. Serum and Vaccine Therapy in Connection with Diseases of the Eye. By Stephen Mayou.
2. Two Interesting Cases of Foreign Body in the Eye. By G. G. Lewis.
3. A Case of Quinine Amblyopia. By C. B. Welton.
4. The Relation of the Teeth to the Eyes. By W. E. Bruner.
- *5. The Suprarenal Extract in the Treatment of Acute Corneal Staphyloma. By P. J. Pontius.

*5. Paul Ponius advised extract of the suprarenal gland for the relief of pain in all forms of keratitis. Experimentally it has been found to reduce the formation of aqueous humor in animals. The influence of the suprarenal gland extract on the arterioles of the eye is to increase the activity of the muscular coat and reduce the size of the lumen while the veins are not so influenced.

The histories of six cases of corneal involvement where staphyloma presented are given, and the beneficent effect of suprarenal extract is noted.

ARCHIVES OF OPHTHALMOLOGY. Nov. 1912.

1. Distortions of the Visual Fields in Cases of Brain Tumor, Binasal Hemianopsia. By Henry Cushing and C. B. Walker.

NOTE.—This is a very interesting article, but because of the frequent referenc to the appended case histories, and perimetric charts, the paper does no lend itself to abstraction.

2. A Simplified Gram Technique. By W. H. Snyder.
3. Additional Experiences on the Excretion of Hexamethylenamine in the Ocular Humors. By L. B. Whitham.
4. Details of Vision of 132 Cases of Intracapsular Extraction of Cataract. By Lieut. Col. Henry Smith.

OPHTHALMOSCOPE. Nov. 1912.

1. An Ophthalmologic Contribution to the Doctrine of Scrofulosis. By Prof. M. Straub.
2. On Salvarsan and Neosalvarsan in Affections of the Eye. By A. M. Ramsey.
3. On Salvarsan. By W. B. Marple.
4. On Salvarsan in Diseases of the Eye with Particular Reference to Its use in Sympathetic Ophthalmitis. By S. H. Browning.
5. On the Toxicologic and Therapeutic Influence of Salvarsan and Neosalvarsan Upon the Eye. By J. Igersheimer.

J. OF LARYNGOLOGY, RHINOLOGY AND OTOTOLOGY. Nov. 1912.

1. The International Collective Investigation of Ozena. By A. B. Kelly, Glasgow.
2. Resection of the Partial Nasal Septum for Double Spenoidal Sinus Suppuration. By P. Watson-Williams, London.
3. Mineral-Water and Climatic Cures in Otorhino-laryngology. By G. de Parrel.
4. Malignant Diseases of the Upper Air Passages, with Notes Upon Two Cases of Epithelioma. By J. Price-Brown, Toronto.

THE LARYNGOSCOPE, Sept. 1912

1. Otitic Indications and Contraindications for the Salvarsan Treatment of Syphilis, by Oscar Beck.
2. Salvarsan in Syphilis of the Nose and Throat, by F. C. Cobb and A. Post.
3. The Effect of Salvarsan on the Ear, by C. E. Perkins.
4. Syphilis of the Upper Respiratory Tract Treated with Salvarsan, by F. W. White.
5. The Wasserman Reaction and Salvarsan in Disease of the Special Sense Organs, by E. R. Carpenter.

6. Chancre of the Tonsil with Report of a Case, by N. L. Wilson.
7. Mastoid Sequestra Containing All Three Semicircular Canals with a Report of the Subsequent Labyrinthine Reaction, by J. M. Ingersoll.
8. The Report of a Case of Sinus Thrombosis, Excision of the Internal Jugular with Recovery, by C. W. Richardson.
9. Four Cases of Fracture of the Larynx, by W. Downie.

Oct 1912.

Sphenoidal Sinusitis in Relation to Optic Neuritis. Joseph P. Tunis, Phila.

Artificially Deformed Skulls with Special Reference to the Temporal Bone and Its Tympanic Portion. Walter McGibbon, Chicago.

Hypophyseal Tumor from the Rhinologist's Point of View. Report of Case. George McBean, Chicago.

Tuberculosis of the Tongue. Silvio Von Ruck, Asheville, N. C.

Some Untoward After-Effects of Too Radical Tonsillectomy. J. A. Stucky, Lexington, Ky.

Three Cases of Acute Follicular Tonsillitis with Unusual Sequela. Samuel McCullough, N. Y. C.

Anæsthesia for Peroral Endoscopy. Chevalier Jackson, Pittsburgh.

Direct Laryngoscopy in the Removal of Laryngeal Tumors, Richard H. Johnson, Baltimore.

Three Cases of Foreign Body in the Bronchus. Sidney Yankauer, N. Y. C.

Esophagoscopy in the Removal of Foreign Bodies. Richard McKinney, Memphis.

Stricture of the Upper End of the Esophagus. E. M. Holmes, Boston.

A "Split" Mask for the Administration of Anæsthetics During Operations Within the Mouth. Samuel Inglauer, Cinn.

MONATSBLATTER FÜR AUGENHEILKUNDE. Jan. 1912.

Studies of the Pigment in the Living Eye, by C. Augstein. From his studies of this subject he comes to the following conclusions:

1. The pigment in the anterior part of the eyeball usually supposed to be congenital, is not so but makes its appearance in the first year of life and gradually develops. The same holds true concerning the pigment rings about the scleral veins.

2. Trauma may be considered as the cause of many pigmentations in the anterior part of the eyeball particularly of the episcleral tissue.
3. The formation of pigment depends upon the presence of extravasated blood and pigmented epithelial cells.
4. Following inflammations of the uveal tract there can be an increase of pre-existing pigment as well as new formation.
5. A migration of coloring matter from the internal pigmented areas to the surface is by no means unusual.
6. After a prolonged use of myotics there frequently occurs a precipitation of pigment on Descemet's membrane. Migration of pigment through the cornea may also take place.
7. The melanosis of the cornea has nothing to do with the membrane pupillaris.
8. In subconjunctival hemorrhage it is an established fact that the earliest absorption of the blood occurs in the immediate neighborhood of the vessels.

BOOK REVIEWS.

OPHTHALMIC SURGERY. *Second Edition.* By DR. JOSEF MELLER, Privatdocent and First Assistant K. K. II., University Eye Clinic, Vienna. Edited by DR. WILLIAM M. SWEET, Clinical Professor of Ophthalmology, Jefferson Medical College; Professor of Diseases of the Eye, Philadelphia Polyclinic; Attending Surgeon, Wills' Eye Hospital, Philadelphia. Cloth, 289 pages. 163 original illustrations. \$3.50, net. Right of translation reserved. Philadelphia. P. Blakiston's Son & Co. 1912.

The first edition of this valuable handbook appeared four years ago, detailing vividly the operations upon the eye and its appendages as practiced in the clinic of Professor Fuchs. This edition has been entirely rewritten and arranged, much for the better. There are 27 more pages and 55 more illustrations. Most of the operations, some added since the other edition, are described with the modifications adopted at Fuchs' clinic; some, *e. g.*, extirpation of the tear sac are Meller's own.

Four years ago Meller wrote about simple cataract extraction: "Apart from the cosmetic standpoint there is no sound argument that can be advanced in favor" of it. . . . "If there is good vision in the other eye" it "may be sometimes permissible." To-day while agreeing with the latter statement and repeating the disadvantages ("necessity of second operation in case of subsequent prolapse of iris, and increase in pressure caused by the occasional distortion and fixation of the iris to the scar") he writes: "Extraction without iridectomy gives the best operative results, but the method possesses several disadvantages which materially limit its employment.

This edition gives us a couple of pages cataract dressing and after-treatment with diet. "Drinking men are conceded a moderate amount of alcohol, and users of tobacco are permitted to smoke the following day. The diet is restricted to liquids, milk, coffee, and nourishing soups with eggs. Diabetics are given 30 grains of sodium bicarbonate daily beside the appropriate diet."

THE ANATOMY AND HISTOLOGY OF THE HUMAN EYEBALL IN THE NORMAL STATE; ITS DEVELOPMENT AND SENESCENCE. By DR. MAXIMILIAN SALZMANN, Titular Professor of Ophthalmology, University of Vienna. Authorized Translation by DR. E. V. L. BROWN, Instructor in the Pathology of the Eye, The University of Chicago. With Five Text Figures and Nine Plates in PhotocolloTYPE. Published by Franz Deuticke, Leipzig Und Wein. 1912. For Sale by The Chicago Medical Book Co., Congress and Monroe Streets, Chicago. 1912. Price, \$5.00.

The subject of this treatise has been dealt with in a most systematic manner:—Part I., comprising, (a) The Eyeball as a Whole (Macro-

scopic Anatomy) and (b) Special Anatomy and Histology of the Eyeball:—while Part II., *The Physiologic Changes of the Eyeball During Life*, includes (a) The Embryonal Fetal Development, (b) The Eyeball of the Newborn, (c) The Extra-uterine Development and Growth of the Eyeball, and (d) The Appearances of Age in the Eyeball.

The plates are of the composite form, so compactly arranged as to contain seventy-eight distinct specimens,—mostly microscopic enlargements of usually about a three hundred magnification—(that of the nerve fibers in the medulated portion of the optic nerve is 950 magnification). These exceedingly fine illustrations demonstrate—first, the indefatigable work of the author in making a collection of such fine specimens; second, the high grade work of the Art Press of Mr. Jaffe in executing the photocolotypes, and third, the excellent setting of the same by the publishers.

And, as a whole, the volume impresses the student with it being one of the few fortunate combinations of the thoroughness; so characteristic of the German scientist, with the fluent style of a natural born translator.

Soon will this volume win a deserved place on the list of text books for our special courses.

STEREOSCOPIC TREATMENT OF HETEROPHORIA AND HETEROTROPIA.

Designed to Accompany the Phoro-optometer, Stereoscope and the Wells Selection of Stereoscopic Charts. By DAVID W. WELLS, M. D., Member of A. M. A. and A. I. H., Associate Professor of Ophthalmology, Boston University Medical School. Ophthalmic Surgeon, Massachusetts Homœopathic Hospital, Boston; Oculist, Newton (Mass.) Hospital. Author of "Psychology Applied to Medicine." New York. E. B. Meyrowitz, Publisher. 1912. Price,

This monograph of seventy-five pages is introduced by brief, but clear reference to the etiology, symptomatology and the ordinary employed forms of treatment of Heterophoria and Heterotropia;—in order that the reader or student may the better understand and appreciate the finer degrees of deviation and less frequently observed forms or cases, which need correction on account of their deleterious reflex effect upon the nervous system.

For diagnostic purposes the author devised a deviometer attachment for the Perimeter,—for treatment, a special "control device" for home exercising and special forms of cards for stereoscope; and for operative cases, a very practical "modification" of Worth's advancement operation has been added by the author,—all of which was given in detail besides a resume of other authorities on the subjects, making, we believe, the most complete consideration or treatise on this recently discovered and utilized method of therapeutics, that can be found in English, if not in any literature. Natural is, because he is one of the earliest investigators in this particular field and two of his

intimate associates—Stevens and Cross—also did pioneer work along similar lines.

As these fine grades of Heterophoria and Heterotropia are becoming recognized as important by those who studied them, this book will be needed by all laying claim to being progressive Ophthalmologists.

THE ANIMAL KINGDOM Considered Anatomically, Physically and Philosophy. By EMANUEL SWEDENBORG. Parts 4 and 5, The Organs of GENERATION and the Formation of the Fœtus in the Womb, with chapters on The BREASTS and the PERITONEUM. Translation from the Latin and edited by ALFRED ACTON. 398 pages and 10 plates. Cloth, \$3.00; postage, 20 cents. Philadelphia: Boericke & Tafel. 1912.

Previous to his theological writings Swedenborg—the son of a bishop, master of numerous languages, the trusted friend of King Charles XII. of Sweden, a member of the House of Lords, an assayer of mines, and the leading engineer of the country, had attained prominence as one of the world's learned men.

The world at large, as well as his native land, is now coming to recognize him as "a great thinker"—witness the testimony of Carlyle, Emerson, Balzac, Coleridge, Browning, Edward Everett Hale, etc.

This book, written about 1742, is a part of an exhaustive study of nature in his search for the soul. The reader must be careful not to measure Swedenborg's terminology nor his way of thinking by the science of today; else he might lay the book aside prejudiced by the terminology and inductive mode of thinking. The work takes us back 170 years—yet a careful reader will be interested in noting how remarkably Swedenborg has anticipated our present day knowledge and philosophy.

In this volume, under each organ quotations, sometimes condensed, are made from the leading authorities of the world (Boerhaave, Morgagni, Schurig, Vieussens, Winslow, De, Graaf, Heister), and these are followed by "Inductions" by Swedenborg.

"From remote antiquity to the present day there has been controversy among the learned as to what the father contributes to the life of the offspring, and what the mother; and whether the soul is infused into the rudiment from the first month of conception, or whether it is put in afterwards—that is to say, whether it comes by engrafting or by inspiration. . . . It will at last appear that somewhat of the father's soul produces the initiaements of the embryo and the principles of all that will exist in the new body. . . . And with the exception of these principles . . . all the are the mother's. . . . The principles are all those things that exist inmosts. . . . The soul is a spirit. The formation of the body progresses in order and by degrees, from first and inmosts to last and outmosts, therefore from the soul and the viscera of the body."

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